

MANUFACTURERS' RECORD

A Weekly Southern Industrial and Hardware Newspaper.

VOL. 9. No. 25.
WEEKLY.

BALTIMORE, JULY 31, 1886.

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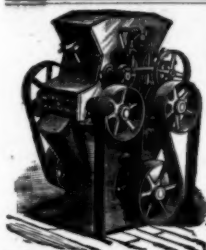
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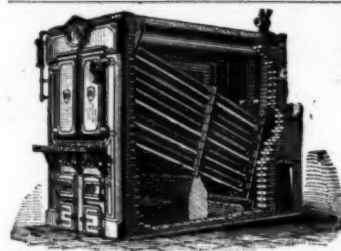
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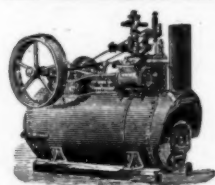
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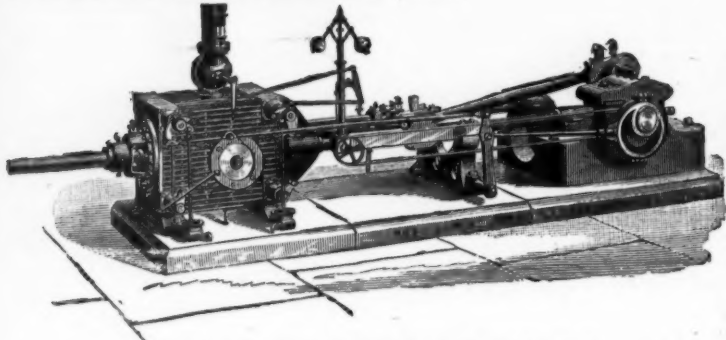
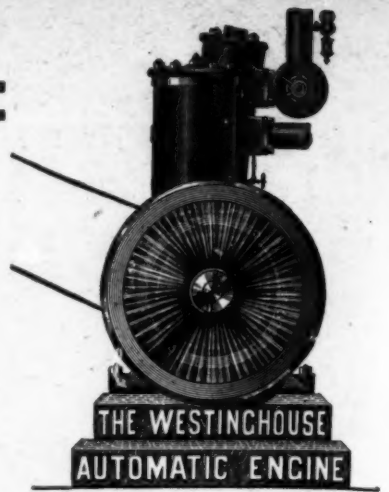
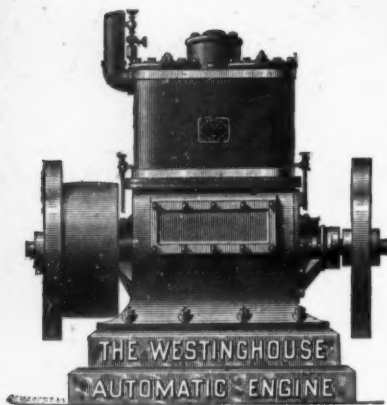
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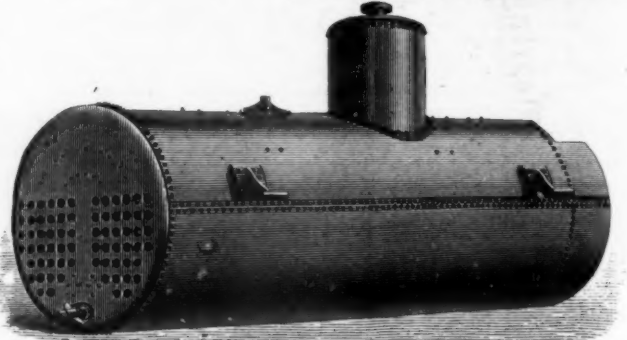


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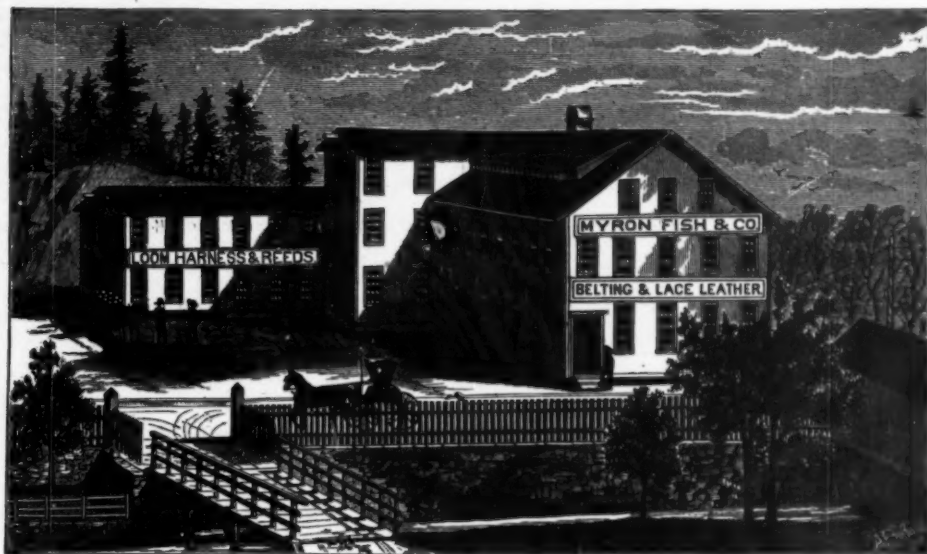
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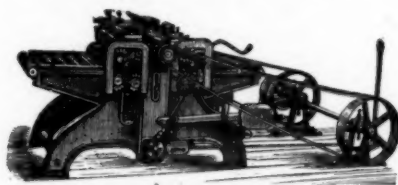
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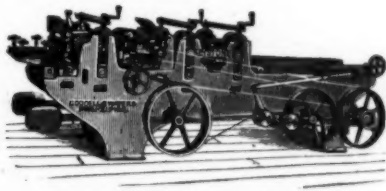
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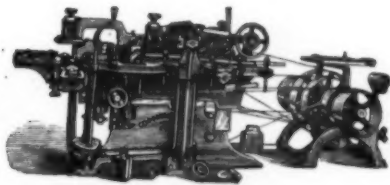
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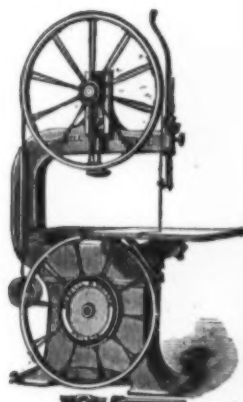
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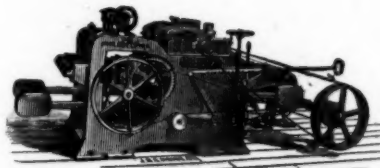
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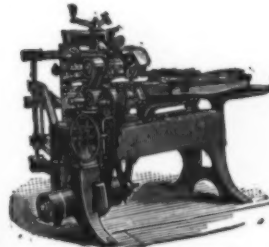
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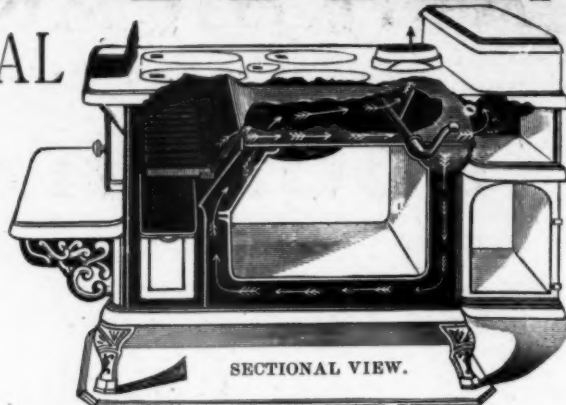
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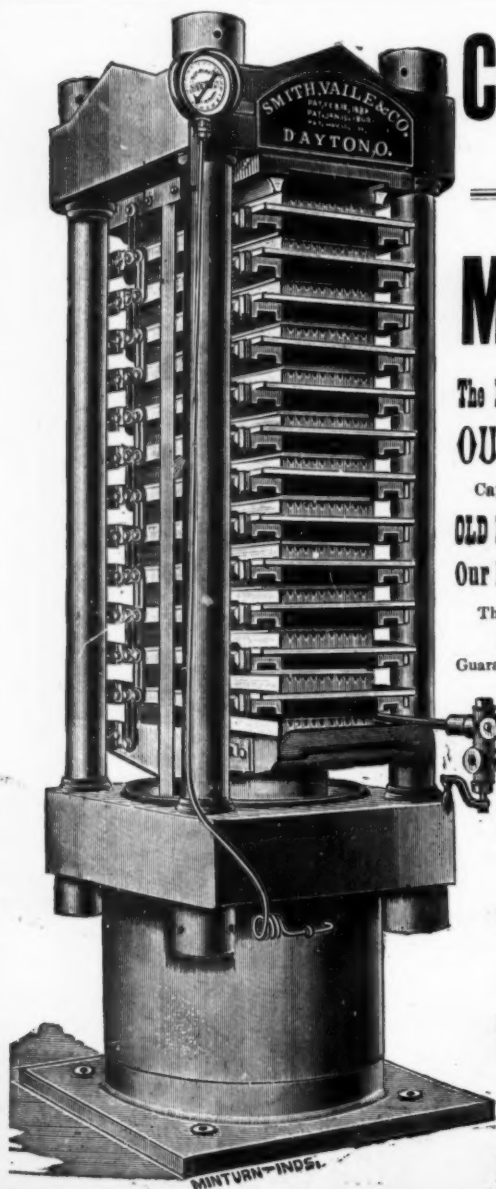
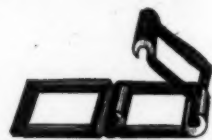


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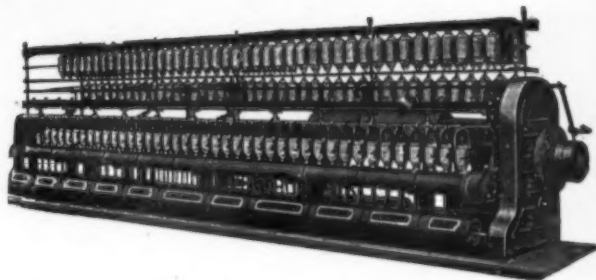
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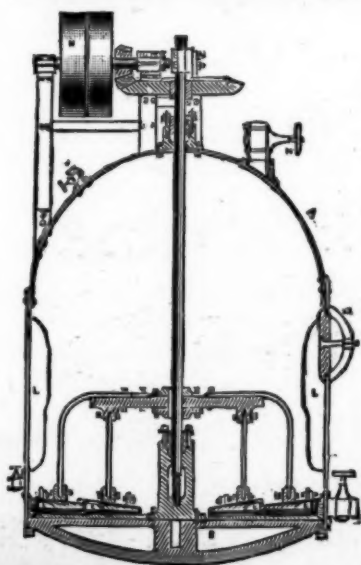
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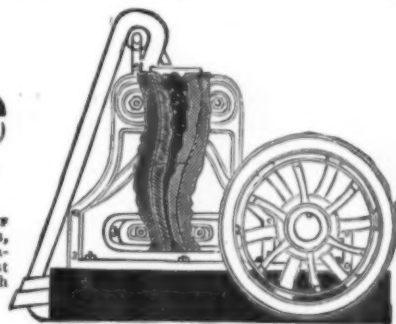
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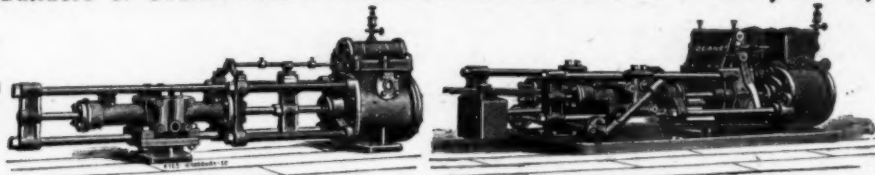
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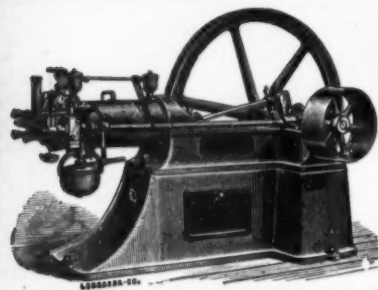
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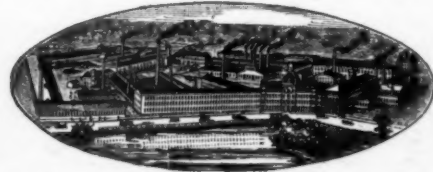
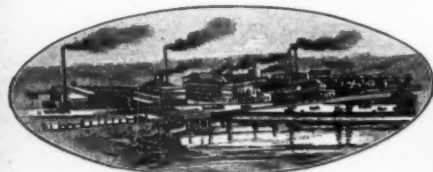
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BALTIMORE, JULY 31, 1886.

The Rise of a Town.

Fort Worth is not a phenomenal town, nor does it stand out more prominently on account of its growth than many others of which the South can boast. Birmingham, Chattanooga, Roanoke, Anniston, Dallas, Atlanta, and many others have made almost if not quite as much progress as Fort Worth. It is, however, a good sample of the rapid rise of cities in the South that a few years ago were almost, and in some cases, quite unknown, and hence a few facts about its rise from a village will be of interest. The Fort Worth Gazette has just published a history of the town, and from this we learn that in 1876 the taxable wealth of the town was about \$250,000, and it had a population of 1,500, but with the building of railroads there came more people and greater prosperity, and in 1886 the city has a population of 27,000 and a taxable wealth of \$7,000,000.

The following figures show the growth of taxable values in the city since 1881 with an estimate for the year 1876. The records from 1876 to 1881 cannot be found:

Total valuation for 1876.....	\$ 250,000
Total valuation for 1881.....	1,002,891
Total valuation for 1882.....	3,214,627
Total valuation for 1883.....	3,851,773
Total valuation for 1884.....	5,343,490
Total valuation for 1885.....	5,616,315
Total valuation for 1886.....	7,000,000

Ten years ago this place had one railroad, now it has seven, and not content with that number, it proposes to build some more. The wholesale trade of the town extends over a wide section of the country and is steadily increasing, its manufacturing interests are developing, its schools and churches are numerous, and in all lines of industry it appears to be pushing forward very vigorously. As we have already said, this is not an isolated case. Many other towns in the South are doing equally as well, and all indications point to still more rapid growth in the future.

An Expert's Opinion on the South.

Mr. Geo. T. Stearns, of New York, who has been making a careful examination of the mineral resources of the South for an investment company that is putting its money in this section, has lately given his views upon the South as a field for investment. Pittsburgh, he says, occupies one extreme corner of what is known as the great Appalachian basin. Birmingham, upon the other extremity, has shown a development in the past five or six years which has created wonder and surprise. The great body of the basin, however, remains entirely undeveloped, and is believed to contain a natural wealth unequalled on this continent. The larger part of this is embraced in the State of West Virginia, the southwest portion of Virginia, Western North Carolina, Eastern Tennessee and Eastern Kentucky. This region will be the great iron, steel and coal producing center of the world. The Mississippi basin, having the water communication of over 20,000 miles, and embracing the area between the Alleghenies and the Rockies, will, ere the close of the succeeding generation, at our present rate of increase, hold a population of 100,000,000 people.

Pennsylvania for 100 years past has been the center of the great iron production of the country. Within her borders are found the heaviest plants for the production of iron and steel. The ore for her early production came from within her own borders, but the exhaustion of the State in this regard was long since recognized, and she has stretched out her arms and has invested millions of dollars in the effort to secure ores for her furnaces in regions far remote. Lake Superior has been very largely drawn upon, and also the Iron Mountain, of Missouri, while there are now large quantities imported from Spain, Algiers and from Cuba, to keep her furnaces in blast. Heretofore, with existing means of transportation, the raw material could be furnished at prices commensurate with the ruling prices of the manufactured article. These conditions will not hereafter exist. It has long been known to scientists, and is now being very largely recognized by the commercial community, that within the main bed of the Appalachian basin lies not only every character of iron ore known to science, but it is further claimed that there is embedded every known metal, showing the stupendous wealth of the region as yet largely undeveloped and only waiting means of transportation when this section of the country will be entirely self-reliant and self-sustaining from its own resources. It is no longer a question of knowledge to the few, but of demonstration to the many, that the States which have been the centers of the iron product in the past are doomed as sources of supply for the future.

It is a fact, says Mr. Stearns, that in the Appalachian basin there is a

deposit of mineral which is the equal to the Lake Superior iron ore or any other known. With these important elements in their favor, the transportation involved to bring the ores to coal would not involve more than 100 miles. The development which has been shown recently in the basin at Knoxville, Chattanooga and Birmingham, and elsewhere in other parts of this district, are merely earnest and incentives for further progress. Particularly is this the case in the working of the Cranberry magnetic ores for the manufacture of Bessemer steel.

The modern process of manufacture of iron and steel is by the use of coke as a fuel; the better the coke the better the product. Heretofore Connellsville, in southwestern Pennsylvania, has been the seat of the great coke product, and has stood pre-eminent. So high has been its character and so great the demand therefor that it has found markets even as far West as the smelting furnaces of Colorado. The area covered by the deposit of coal which produces this coke is limited to a few thousand acres, yet several thousand ovens, several thousand men, and millions of dollars of capital are employed in its production.

The Elkhorn vein of coal of eastern Kentucky, and which, it is believed, extends into southern West Virginia, and the character of which has only recently been developed, is claimed to be the most valuable bed of coking coal in the United States. This bed has been already proven up over an area of 700 square miles, and shows much less percentage of ash—in some cases as low as 3 per cent.—and less sulphur and other deleterious properties, and is more compact in texture and of stronger bearing surface in the furnace than the coke of Connellsville. Proofs and developments such as these substantiate the prophecy of the late Prof. William B. Rogers of the Technological Institute of Boston, that in this territory will be hereafter found the seat of the great iron industry of the world.

Other than the great wealth and possibilities of this region, as shown by the statements made, the canal coal of West Virginia and Kentucky is a factor of vast importance. Here as nowhere else in the world as to quantity is found this deposit, while in quality, with the exception of the very limited supply of the Bog Head coal of England, a coal so limited in supply as to be in no sense a competitor, is its equal to be found. As yet, from lack of means of transportation, the production of canal coal is of very limited amount. Whenever need exists for the enrichment of gas, this coal, when available, will be in demand, and will stand transportation throughout the East, Northwest and South. Not only this, but it is stated that a credible offer of a contract for 50,000 tons a year, at \$20 per ton, laid down in Paris, France, for a certain Kentucky canal

coal, for the uses of its gas company, has been made.

The timber of this section of the country is superior in its character, and in West Virginia and Kentucky covers nine-tenths of the area. Here all the deciduous woods flourish in primeval growth, and in certain restricted areas are found isolated patches of the soft pine and the hemlock. Here also is the present existing area of the black walnut, which from its exhaustion, is yearly becoming more valuable. With avenues of transportation open, immense quantities of timber, lumber, staves, hoops, oak bark, hemlock bark and other products of the forest would seek markets, and, by reason of its peculiar location, markets would be found in all directions for all its products.

Cost of Making Pig Iron in England.

The United States Consul, Schoenhof, at Tunstall, Eng., in his report to the State Department regarding the coal and iron interests, says that the advantages which Great Britain possesses in iron making consist mainly in the proximity of coal and iron mines. The cost of making pig iron at two furnaces, of which he secured full data, was for furnace A, which produced 837 tons of iron in the week ending March 2, 1886, the cost reported, being the expenses for production, that iron was:

	Per ton.	Total.
Coal, 1,449 tons.....	\$1.64	\$2,376.36
Coke, 126 tons.....	2.76	347.76
Slack, 176 tons.....	.97	170.72
Limestone, 310 tons.....	1.22	378.20
Iron ore, 1,594 tons.....	2.43	3,873.42
Labor.....		726
Renewals, repairs, &c.....		787

837 tons of pig iron.....\$8,665
Or \$10.35 per ton, in which furnace labor stands at 86 cents.

The output of two furnaces situated on coal beds was:

	Tons pig, 1885.	Labor, per ton.
A.....	24,604	\$0.91 1/2
B.....	24,303	1.16

The figures for pig iron made at B are:

2 tons of ore, at \$2.19.....	\$4.38
2 tons of coal, at \$1.58.....	3.16
8 1/2 cwt. of limestone.....	.49
Labor.....	.97
Renewals and repairs.....	.40
Interest, &c.....	.25
	9.65

Mr. Schoenhof says:

"Both A and B produce their own coal and ore, and come to almost exactly the same cost. The difference of 70 cents in the computation of A's price is due to his charging in ore and pig iron about 25 cents more in general expense charges, which B says it fully costs, but is hard to get out of iron at this present time, when Cleveland is selling at \$7.78, which all say here cannot be produced at much less than \$8.75 and pay expenses. Others, however, hold that at Middleborough iron can be made at \$7.78 even at a small profit, as all the scientific inventions of the last fifteen years have been brought to bear on iron making in the Cleveland district to a much greater extent than in any other iron district of the United Kingdom, the economizing of fuel being not the least of the advantages derived from the improved furnaces of nearly twice the capacity of those in the older districts. The Cleveland district, however, has advantages for iron making which are nowhere else to be found in the Kingdom, and consist, as I am informed, mainly in the ore being all surface ore and easily mined. Besides this, the furnaces of the later construction are of much greater capacity, and the cost is therefore below other iron making districts."

OUR BIRMINGHAM LETTER.

Growth of Protection in the South. Steady Improvement at Birmingham.

[Special correspondence MANUFACTURERS' RECORD.]

BIRMINGHAM, ALA., July 26, 1886.

If iron were the only interest of moment in this city there would be little to write of this week, because iron does not present any new feature yet. The market is still steady and shows signs of rising, and the demand, both Eastern and Western, is steadily improving, but quotations are unchanged. Perhaps it is notable that the uneasiness about the future of Southern iron in Northern markets is more and more marked in the older iron-producing States than ever before. Pennsylvania people, and papers as well, show it in a variety of ways, and perhaps in no way more than in the large representation coming this way to report on or take a share in the very development that has been formerly so much decried in the Keystone State.

Let me briefly run over the local phenomena before treating of a thing or two of greater interest, perhaps, to your readers. All the movements and enterprises of this city and district are on the go just as I have reported them week in and week out. The new furnaces, hotels, passenger stations and all other such matters are growing right along. So are the stove works of the Louisville company, which last week decided to put up a hundred per day stove plant, instead of 50, as originally intended. These stove works, which are to be located close by the Sloss furnaces, on land donated by the Elyton Land Co., have already affected the price of property in the immediate neighborhood. The locality is the most desirable in Birmingham for manufacturing purposes, and property of that description is growing hard to get. Everybody wants water, railway frontage and other facilities for factory uses, and that description of ground has been taken up very rapidly during the past year. General real estate movements are more active than has been ever known at this season of the year. Several large lots of expensive business property were taken out of the market for improvement last week, and residence property showed a steady enhancement, as indeed it has for a year or more. One of the most successful means for bringing outside property into market has been the fine street car system that radiates in all directions from the centre of Birmingham. North, south, east and west the tram cars are running, and it would be difficult to find a city double the size of this one anywhere that can show the same amount of good street car service.

Writing of street cars reminds me that we are to have an elevated railway, or rather a railway on an elevation, along the ridge of the Red Mountain above the city. A survey has been made and work is to be commenced soon. This enterprise will be in connection with an incline railway from the valley to the ridge, and, when opened up, will bring a considerable area of desirable suburban property not now available into use. Dr. Caldwell, Mr. Josiah Morris, of Montgomery, and several other prominent men of the State are backing the project.

The Southern mind is bent upon the tariff a good deal more than it was ever before. Why this is so the columns of the MANUFACTURERS' RECORD for the past year are able to tell, and on the extremes of the question, the Times-Democrat and the Courier-Journal are not wholly innocent of having stirred the puddle a little. Just now the Courier-Journal has turned loose with a view to make what free-trade capital it can in the section before the next Congressional elections. Since the protection manifesto

of the Chatham, Georgia, democratic committee, the necessity for doing something to mend the breaks in Southern free trade forces is too apparent to require comment. But the holes will not be repaired. The South is stampeding toward protection, and the movement cannot be stopped. Circumstances heretofore discussed have tended to make the farmers protectionists, the industrial classes are so to a man, and it is not at all unhelpful that we shall have approximately a solid South against the machinations of Mr. Morrison and his party in the next Congress. The South is not the abject slave to party that it is popularly supposed to be. There are not wanting signs that anything like indifference to Southern material interests on the part of the party organization might lead to serious political results. During the late presidential campaign I traveled a good deal through Louisiana and Florida. It was a great surprise to me to find that many prominent citizens of both States were very extreme Democrats in State affairs, and yet were supporting the Republican national ticket; this, of course, because the parties in question were distrustful of the national party as to protection to native industry and labor. There will be a good deal more of that sort of thing before the next presidential canvass, and it behooves the party magnates who dance when Messrs. Cooper, Hewitt, Belmont and Morrison whistle to look out for it. The Courier-Journal may pound the gong if it likes, but the people themselves have taken to thinking, and Lord, how they do think!

There is much interest anent the meeting of the American shipping league, called to meet at Lake de Funiak in November. Possibly the South has a greater stake in this question of the extension of American ocean traffic than any other section. Certainly it is to and from Southern Atlantic and Gulf ports that the merchant fleets of the future will ply. The commerce between Northern ports and Western Europe is a foreign trade in more than one sense, and it is one in which the share and show of American shipping is a small matter. On the other hand, the rich trade of Latin America is a prize which, if gained, will naturally accrue in the first instance to the South. Perhaps this is why many of our Northern statesmen are indifferent to the encouragement of American shipping. But the South is so much interested that it cannot afford to be idle in the matter. Conferences like that called at de Funiak are evidence that the matter is in foment. It will be hard lines for the coming Southern M. C. who does not prove himself heartily and aggressively in favor of substantial aid to American shipping, as well as ample protection to American capital and labor. These the New South will have, or stand convicted of raising that pandemoniacal crop it has been so often accused of producing.

G. B. WEST.

MR. JOHN JARRETT, for many years the president of the Amalgamated Association of Iron and Steel Workers, in an interview with a reporter of the Nashville Union, said:

"From my knowledge of the country and the little that has been done toward its proper development, I have been greatly surprised to discover the immensity of the supply of raw material for iron manufacture that abounds in Tennessee, Alabama and Virginia. The close proximity of the ore, coal and limestone, gives these States an advantage which the North never possessed, and which, with the application of the proper effort and push, would make these States what I fully believe they are destined at no great distant day to be—the center of the iron-producing region of this country."

A THRIVING TENNESSEE TOWN.

The Growth of Bristol, Tenn.—Interesting Facts From the "Border City."

[Special correspondence MANUFACTURERS' RECORD.]

BRISTOL, TENN., July 22, 1886.

This thriving and prosperous town, lying immediately on the borders of the two States, Tennessee and Virginia, evidences what can be done by indomitable industry, energy and pluck. With a determination that she should hold a prominent position among the cities of the Southwest, her citizens have left nothing undone to gain for her a well-merited distinction, and the sobriquet of the "Chief Border City" tells the story of successful achievement. To a stranger it is a matter of no little interest to learn that the border line between the two above named States passes immediately up the middle of the main street of the joint corporations, one side of the street being in Virginia, the other side in Tennessee, with a difference in the clock time between the two sides of exactly one hour, and that in favor of Virginia. Though known as Bristol proper, the two corporations are known here as Bristol-Goodson. There are two separate and distinct municipalities, two mayors, boards of aldermen; a police force in each, subject to the control of the respective boards, and all the paraphernalia of separate city governments, as different and defined as though the two cities were a hundred miles apart. They remind one of the Siamese twins, joined together, but in other respects acting independently of each other. There are no municipal conflicts, however, everything working as harmoniously as clockwork. Bristol Goodson occupies an area of two miles square, and contains a population all told of about 6,000 people, actively engaged in the various industries within and immediately without the precincts of the city proper. The largest and most important of these is the tobacco industry. Prior to 1872 this was altogether unknown as a tobacco growing section, about twenty thousand pounds being the utmost limit of the entire crop throughout the region. Since that time it has increased to from five to seven millions of pounds, and growing larger each year. This remarkable change, without a parallel in agricultural production, was brought about entirely through the indomitable pluck and farsightedness of Mr. A. D. Reynolds, the leading manufacturer of the staple in this part of the country. Having a thorough knowledge of the weed and its requirements as to soil and proper culture, he made up his mind that the country round about Bristol within an area of several hundred miles had characteristics which might be availed of in an eminent degree in the growth of tobacco, so he determined to rouse the interest of agriculturists generally to the importance of developing the industry in the section named. He built in 1872 a five-story brick factory, 42x100 feet, and had tobacco shipped to him from Danville and the Eastern markets, which he worked up while awaiting the developments he had fostered. Within three years his more than sanguine expectations were realized. Bright tobacco came pouring in upon him from the surrounding country until the increase reached the enormous proportions above named. He has since added to his factory another building, 40x152 feet, with a wing, 40x60, to accommodate his steadily increasing business. He employs two hundred hands, and his goods find ready sale throughout the Southern States at large, extending to Texas. The three tobacco factories at Abingdon are the outgrowth of the enterprise started in Bristol in 1872 by Mr. Reynolds. He has done more to build up Bristol's manufacturing interests than any other man within her border.

Another feature connected with the handling and sale of leaf tobacco is the large and commodious warehouse of Messrs.

Graves & Conway, on Cumberland street. Their sales of three million pounds per year include all qualities of bright tobacco, and their establishment is so constructed as to afford every facility for examining and selecting colors, by means of spacious skylights and windows throughout the building, which is 60x135 feet deep. The sales are all made at auction, and the tobaccos handled by this firm are from the great tobacco growing districts of North Carolina, Tennessee and Virginia. In addition to the above named warehouse they have a large leaf factory, 40x100 feet, where, throughout the length and breadth of three stories, they use their own processes for perfecting the leaf as to color and quality, which, when in packing order, is shipped all over the South to the various bright tobacco factories. The business of these gentlemen is immense, and for the convenience of those who patronize their warehouses they have a large wagon yard with stabling for teams, thereby facilitating business and offering great inducements to parties to seek this ample and ready mart for their staple. Mr. Graves has an established reputation as a judge of wrappers, and orders from the largest manufacturers in the Southwest are entrusted to him for his selection. These gentlemen handle immense quantities of fertilizers for tobacco only. To say that this entire enterprise had added greatly to the wealth and commercial growth of Bristol is to give it but faint praise.

About 1½ miles below the city is the cotton factory of Messrs. Fulton & Sparger. They manufacture a superior quality of cotton yarns and carpet warp, the market for the former being East Tennessee and Virginia, and for the latter, New York uses the whole of them. They employ about 30 hands and run one thousand spindles. There are also within a mile of the city a crockery factory; a new brick factory, where bricks are made by pressure alone and require no burning. Within the city are the Bristol-Goodson Marble Works, Mr. I. E. Chapman, proprietor, which supplies the surrounding counties of Russell, Scott, Lee, and the other upper counties of East Tennessee; the large hardware establishment of Mr. Chas. L. Sevier, who sells besides, large quantities of Tennessee wagons, spring wagons, buggies and Chattanooga chilled plows, and does a large business, and also that of Messrs. Ferguson & Thomas, who do a very extensive Southern business in their special wares. There are in Bristol two flour mills, and five more are within a short distance of the city. The Bristol Foundry, owned by Messrs. Smith & Goodell, manufactures chilled plows, cast-iron fencing, mill gearing, hollowware, circular saw mills, cane mills, feed cutters. It has fine machinery, some of it the best in this section. The foundry has an established reputation for turning out good work.

Speaking of iron reminds me of steel, and I must tell you of something truly marvellous which I witnessed yesterday in the welding of steel. Mr. W. A. Sparger, of this city, is the owner of a "patent white-heat welding compound," the bulk of which is a natural deposit, discovered in East Tennessee, and is manufactured expressly for working steel. I saw an old rasp, made of the hardest steel, heated to a white heat, and then, after having borax, which is commonly used in welding, applied, burnt up until it was perfectly worthless. The smith broke a piece of it off, and heating to a white heat again three pieces of the same rasp, he covered them with the "Sparger compound," welded the three pieces together, so that not a trace of a seam or crack showed, and there manufactured out of what a few minutes before was worthless stuff, a perfect cold chisel, splendidly tempered and polished. The action of the compound restores the burnt-out carbon, which is the life of the steel, and renders it tougher than before. I would not have believed it possible if I had not seen it. The chisel itself was presented to me. This

compound will work wonders in the utilizing of old steel scraps, and hundreds of thousands of dollars will be saved, in what have heretofore been thrown away. Steel scraps can be welded into solid bars without a flaw of any kind whatever. It has been tested in New York on different qualities of the metal by Joshua Rose, M. E., who says that "it greatly improves the cutting qualities of the steel, and the result was the same with two different qualities." Mr. A. C. Milliken, general manager Millvale Steel & Iron Works, Pittsburgh, Pa., says: "I think it wonderful, and do not hesitate to say I have never met with any welding compound half so good." He adds: "I know in a short time you will have more orders than you can fill." The Newark Steel Works some time since ordered 600 pounds to give it a fair test. Mr. Sparger showed me yesterday an order from them for 12,000 pounds, thus emphasizing the old adage of "the proof of the pudding, &c." It is sold in bulk at 5 cents per pound.

The country around Bristol is famous for its health-giving mineral waters. Notably among these are the wonderful Seven Springs of Washington county, Va. From these springs is manufactured the celebrated "Iron-Atom Mass," which contains some of the very best tonics and alteratives to be found in the Materia Medica. The mass is condensed from the waters of the seven springs flowing and intermixing. They are natural outbursts from the earth and in close proximity to each other, yet holding in solution properties differing in character one from the other in a marked degree. Messrs. Dickey & Anderson, druggists on Main street, are the manufacturers of this wonderful health restorer, and are sending it throughout the country in large orders.

Bristol abounds in railroad facilities, the N. & W. R. passing right through it, and another is in process of building, viz: "The Southern Atlantic & Ohio." This road will run to the Big Stone Gap coal fields in Wise county, a distance of 62 miles. About 30 miles from the city it will run for 6 miles over the immense deposits of the celebrated Tennessee variegated marble. In quarrying this the marble can be lifted on to the cars from the quarry, thereby facilitating shipments. The road will open up vast fields of great mineral wealth and a fine agricultural section of country. It will pass through the great Natural Tunnel in Scott county, which is 900 feet long by between 200 and 300 wide and 150 high, one of Nature's wonders, eclipsing in size and grandeur the renowned Natural Bridge. The East Tennessee, Virginia & Georgia Railroad has been and is another great agency in the prosperity of Bristol and her surroundings, particularly so since its consolidation with the N. & W. R. R. and the completion of the connection with the Richmond & Danville system, thereby opening up trade with an immense country, where iron and coal, as well as cotton, tobacco and cereals, are abundant.

The people of Bristol are a law-abiding and a great church-going people, judging from the fact that there are 10 churches of various denominations within her limits, 8 of the 10 being on the Goodson side, which speaks well for old Virginia. The Bristol or Tennessee side is about atoning for this to some extent by building an eight thousand dollar hall for the use of the Young Men's Christian Association. The Bristol Woolen Mills are another very important industry, situated one mile from the city on the line of the N. & W. R. R. In this twenty-five hands are employed. There are twenty looms, two sets of 48-inch machines and some three hundred spindles. Water power is used, driving one 30-inch National turbine wheel. The works have a capacity of about 300 yards per day, and manufacture blankets, jeans, linseys, flannels and yarns, which find market throughout this region of country generally. They are anxious to establish an agency in Philadelphia.

The banking facilities of the city consist of one bank only—the National Bank of Bristol. Its capital is \$50,000, with a small surplus. The business community is anxious for the establishment of another bank on the Goodson or Virginia side. More business would undoubtedly be done, and merchants would not be compelled to pay from eight to twelve per cent., more generally the latter, for discounts. A new enterprise in this line would be hailed by the merchants of both municipalities with delight, and from the amount of business done here, and the accommodations arising therefrom which are needed always, such a venture would be, beyond all peradventure, a safe and profitable one.

There is a need in the way of hotels here, the only one that can truly be said to have a right to the name being the Virginia House, S. A. Vick, Esq., proprietor. It is situated very conveniently to travelers, immediately opposite the railway station, and is justly noted for its large and airy rooms, good fare and attentive servants. It is the resort of commercial men from all parts of the country.

I note here what I have observed in my trip through Southwest Virginia, that the great want that is felt in fostering the industrial pursuits and developing the varied resources of this region is: sufficient capital. Opportunities for investment, with an absolute certainty of profitable returns under good management, are offering all the time, and it is with the hope that capital may be attracted to this spot that I mention the fact. There are iron, slate and coal properties awaiting development, while very near at hand there are quarries of exquisite variegated marbles, unworked, which offer great inducements to any who may be interested in that particular line of business. If they will only visit this section and see for themselves, they will not be slow to appreciate the fact that many industries of great value are as yet in their infancy, and that fortunes are within reach if they will only lay hold on them by a judicious use of the capital that is necessary to their proper growth and development. W. M. P.

We Sincerely Pity Them.

A few days ago a smart young man came into our office, and inquired if we could send him to a dressing job. We inquired where he was from, and learned that he was directly from New York State, and not a great way from Utica. We asked him if he read Wade's Fibre and Fabric. He replied that he did not regularly. We then handed him a copy of the last issue, and pointed to the advertisement calling for "two first-class dresser tenders," near the place he had come from. Here was a case where the reading of a paper specially prepared for this man might have saved him enough money to pay for his paper the rest of his life. Such cases are not rare; they are coming up frequently, and yet a large majority of our operatives will not read.

Every person, no matter what business they are in, should read at least one paper, specially devoted to their interest. There is not even a cotton weaver in the United States that can afford not to read Wade's Fibre and Fabric. And yet new subscribers, who have been persuaded that they would be benefited by reading it, drop off occasionally. Indifferent, "don't read what they do get," etc. "We sincerely pity this class of men;" they are content to sit in the shade and suck an old clay pipe, and let the world "wag along as it will." They do not care; they do not think; do not want to investigate; they are like an old pasture, all is taken from them that is possible, but never cultivated. We are, indeed, sorry for such people; they are truly deserving of pity. We would cheerfully furnish Wade's Fibre and Fabric free to all such operatives, but we have not the time to go with it and read it to each one. If the missionaries now in Africa and

China could be called home and set to work among this class of people to teach them to think, to read and to investigate, the world would be the better for their labors.—Wade's Fibre and Fabric.

We occasionally come across the same class of people. They haven't the energy to keep posted as to the movements of trade in their own lines, or else they are so well satisfied with themselves and with their own knowledge that they do not care to learn anything more.

Workmen in Free Trade England.

Under date of May 12, 1886, Mr. Edward Trow, the general secretary of the Amalgamated Iron Workers' Union of Great Britain, wrote to Mr. John Jarrett, of the Amalgamated Association of Steel and Iron Workers as follows:

"In reply, I send you various arbitration reports, from which you will find rates of puddling and price of bar iron in Staffordshire from 1851 to 1871, and our rates from 1869 to last award. The rates paid now are six shillings and three pence per ton of 2,220 pounds, with extra prize money of six pence each to forehand and underhand for full shifts and extra for Monday work as per enclosed. Staffordshire now receives six shillings three pence per ton in lieu of our extras, and it is fair to assume that our rates were six pence higher than Staffordshire from 1859 to 1872, and the Staffordshire custom governs the whole of the midlands. We have no record of the rate paid in Staffordshire. * * * The provisions vary in price in each district, as do rent and rates and living and clothing. * * * While protection may be of service and benefit to you who have food enough and to spare, who can give employment to your producers and are not compelled to purchase outside of your own country, we, who are food-purchasers, unable to feed ourselves and the employment of whom depends upon selling our produce to other countries, have nothing to protect. We sell, not buy, manufactures. We buy, not sell, food. To protect manufacturers would not benefit; to tax food would injure us. If labor was combined the world over, and speculative and competitive trade could be superseded by legitimate trade, a proper portion of the people kept upon the land and overproduction prevented by stopping the glut in the industrial labor markets, a lessened number of laws invoked and through co-operative production the wealth of the world were fairly and justly distributed, then we should have a fair system of trade and commerce and workmen obtain justice.

With regard to condition of trade there is no man living who ever knew the trade of this country in such a depressed condition, or so many men out of employment. I will give you a specimen of our district: In 1872 we had 2,136 puddling furnaces in operation; in 1876, 1,685; in 1882, 1,236; in 1885, 991—at end of each year—and we have at present less than 500 at work, and other trades and other districts are no better. In fact, we have had thousands in every district during the past winter dependent upon charity and the stone-yard for bread. Our flour is from 1s. 5d. the fourteen pounds for common to 2s. the fourteen pounds for best; 1½d. to 4d. per pound; coffee, 1s. 2d. to 1s. 8d. per pound; tea, from 1s. 6d. to 4s. the pound; potatoes, 5d. to 6d. the fourteen pounds; ham, American and Irish, 6d. to 8d. per pound; best, 9d. to 11d.; beef, American, 5d. to 8d., English, 8d. to 11d.; butter, 1s. to 1s. 1d. per lb.; eggs, thirteen for 1s. Our rents are less and clothing cheaper, but our wages are very considerably less. Our labor market is glutted; our coal pits, blast furnaces, mills, factories and forges in most

cases wholly or partly idle; our men in tens of thousands idle and discontented."

And yet free traders want the United States to adopt the free-trade doctrines of England.

RALEIGH has been selected as the location for the industrial school to be established by the State of North Carolina. The decision of the board to put this school into operation without any further delay is a very wise step. The South needs industrial schools, and every one that is established adds to the prosperity of its people. With the rapid development of industrial interests there is an increasing demand for young men of good technical education. Unless the South makes provision for preparing her own people for such work, the demand must be supplied from other sections. The full importance of preparing the rising generation for the thousands of openings for profitable employment that the industrial development of the South is making, ought to be fully impressed upon the business men of that section. The young men of the South have a wide field of employment opening before them, but training is needed to enable them to fill the most responsible positions, or else they will only be "hewers of wood and drawers of water," while others reap the benefits of thorough technical education.

SEVENTY acres of land north of Birmingham, Ala., were yesterday sold at the rate of \$400 per acre. As the same land was purchasable five years ago at about \$50 per acre, an idea of the increase in the value of property in that rising district can be obtained.—New Orleans States.

Yes, and a one-half acre in Birmingham lately sold for \$97,000. Ten years ago this land was worth little or nothing. Manufacturing has made it valuable and is steadily increasing its value. The land owners are growing rich, the farmers find a good home market for all their fruits, vegetables, poultry, &c., and everybody in and around Birmingham is prospering. Chattanooga can tell the same tale, and so can Anniston, Roanoke and other places. This is the result of manufacturing, and this manufacturing has been developed through the influence of a protective tariff. And yet there are some papers in the South that are opposed to protection! They would destroy the power that is redeeming the South from poverty and restoring it to prosperity greater even than was ever known before the war.

THE cotton mills of Augusta, and others near there, have organized the Southern Manufacturers' Association, with Mr. H. H. Hickman, president, with a view to uniting all Southern mills in a protective association, similar to that of the New England mills. The object of this association is not to make war against the laborers, or in any way oppress them, but simply to defend its members against arbitrary and unjust demands.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

The compress previously reported as being built in Birmingham, Ala., by P. D. Barker and others, will require an investment, it is claimed, of about \$100,000.

The Birmingham Street Railway Co. have added \$30,000 to their capital to extend their lines.

A new iron ore mine, it is reported, is being developed near Trussville, Ala.

A stock company has been formed with a view to purchase the Blount Springs Hotel, at Blount Springs, Ala., and to build another hotel.

F. J. McCoy, Wilson Station, Ala., expects to finish his new saw mill in about one month.

Geo. Lundsford, and Caldwell & Milner, of Birmingham, propose to erect large business houses.

The Jacksonville, Gadsden & Atlanta Railroad has been incorporated in Alabama.

ARKANSAS.

Wm. Beam, Crystal Springs, Ark., previously mentioned, contemplates putting up a saw mill.

Lehman Bros., Rector, Ark., will start a brick yard.

Van Buren, Ark., is trying to secure the location there of shops for a new railroad. Jesse Turner can probably give particulars.

The Oxley Stave Co. are reported as building a large stave factory at Poplar Bluff, Ark.

The Nashville & Arkansas City Land & Industrial Co., capital stock \$200,000, has been organized at Arkansas City, Ark., to build a compress, a hotel, &c.

R. G. Atkinson & Co., Pine Bluff, Ark., reported last week as having received contract to build the new machine shops at that place for the St. Louis, Arkansas & Texas Railroad, have sub-let contract to Hoffman & Baughman, of same city.

FLORIDA.

The Fort Mason, Seneca & St. Johns Railroad Co. has been incorporated in Florida to build a railroad.

G. S. W. Brown, Tampa, Fla., contemplates starting a saw palmetto straw factory.

It is reported that another ice factory will be built in Palatka, Fla.

Alex. St. Clair Abrams, of Tavares, Fla., and others are organizing a company to build a railroad from Palatka to Tavares.

Rufus Milligan and S. C. Adams, of Milton, Fla., and others, have organized a company to build a 30-mile railroad in Calhoun county, Fla.

C. H. Smith & Co., Apalachicola, Fla., have commenced rebuilding their planing mill lately burned.

GEORGIA.

Baldwin & Co., Dawson, Ga., are preparing to build a planing mill.

Kelly & Strickland, of Cumming, Ga., have ordered new machinery for their mill.

The Hackett & Rice Iron Fence Co. has been organized in Atlanta, Ga., to establish a wrought iron fence factory.

W. H. Hackett, of Atlanta, is preparing to mine manganese at Cave Spring and at New Bethel, Ga.

KENTUCKY.

The Ruby Carriage Co., Louisville, Ky., will erect a \$5,000 carriage factory.

Charles D. Meyer, Louisville, Ky., is preparing plans for a 4-story 50x200 feet building.

The Powells Valley Railway Co. has been organized in Knoxville, Ky.

The Henderson Woolen Mill Co., Henderson, Ky., previously reported as enlarging their mill, will add a clothing factory.

Covington, Ky., will invite bids for supplying the city with water.

It is reported the Mason-Foard Co. will establish a bent-wood furniture factory in the penitentiary at Frankfort, Ky.

It is reported that the Ashland Coal & Iron Co., Ashland, Ky., will build the furnace previously reported as rumored to be put up at Ashland.

LOUISIANA.

Geo. B. Lawason, New Orleans, has asked for the privilege of erecting electric light works.

The Texas & Pacific Railroad, E. B. Wheelock, general agent, will light their wharves at New Orleans with electric lights.

Improvements are being made to the Commercial Cotton Press, New Orleans.

A cotton compress is being put up corner of Euphrosine and Franklin streets, New Orleans.

L. J. Fleury, 1089 Magazine street, New Orleans, has purchased ground with a view to building a furniture factory.

MARYLAND.

The Maryland Electric Motor Co., capital stock \$250,000, has been organized in Baltimore to manufacture electric motors, by R. W. Baldwin, Wm. G. Wetherall, Jr., John H. Furman and others.

Freeborn G. Smith, Brooklyn, N. Y., has, it is reported, contracted for the building of a \$20,000 piano factory in Washington, D. C.

MISSISSIPPI.

T. V. Wensel, F. A. Dicks and others, of Natchez, Miss., are investigating the cost of building a large hotel.

Efforts are being made in Vicksburg, Miss., to organize a new cotton seed oil mill company.

The Progress Manufacturing Co., Meridian, Miss., are enlarging their works; will build a new foundry, &c.

The Planter's Cotton-Seed & Crushing Association has been organized at Greenville, Miss., by H. A. Mullaly, Geo. Reade, Chas. H. Smith and Nathan Goldstein, to build a cotton-seed oil mill, capital stock \$50,000.

NORTH CAROLINA.

Wilson Kindley, Thomasville, N. C., has sold his flour mill, and will, it is said, engage in mining.

New machinery is being put in the Ossipee Cotton Factory, Gibsonville, N. C.

Efforts are being made to secure water works in Salisbury, N. C. The mayor can give particulars.

W. Middleton, Harrisburg, Pa., is reported as intending to start concentrating works somewhere in North Carolina.

The Carolina Foundry Co., Hickory, N. C., want to buy bolt cutting and tapping machine.

SOUTH CAROLINA.

The Richmond & Danville R. R. Co. (E. B. Thomas, Richmond, General Manager) are preparing plans for new passenger accommodations at Columbia, S. C.

The Charleston Electric Light Co., capital stock \$50,000, has been organized at Charleston, S. C., with Geo. B. Edwards, president, and P. P. Toale, secretary and treasury, to build electric light works; have adopted Thomson-Houston system; ordered part of machinery.

TENNESSEE.

Maurice Blaufield, Knoxville, Tenn., is reported as intending to establish a tobacco factory.

Alex. A. Arthur and others, Knoxville, Tenn., have organized a lumber boom company.

Lowenstein Bros., Memphis, Tenn., invite bids for building a 5-story house; also, for steam fittings, boiler and engine, &c.

D. F. Valentine, McMinnville, Tenn., previously reported as contemplating starting a broom factory, has put it in operation.

J. S. Cooley, Nashville, Tenn., will erect \$10,000 building.

A company is being organized at Gallatin, Tenn., to purchase the Walton Flour Mill of that place and put in new machinery.

W. H. McCarthy, Chattanooga, Tenn., has established a blacksmith and machine shop.

A machine shop, it is reported, is being built in Sherwood, Tenn.

Cherry, Morrow & Co., of Nashville, Tenn., have, it is reported, purchased a rolling mill, which they will erect in that city.

The Knoxville Brewing Association has been organized at Knoxville, Tenn., to build a brewery, ice factory, &c. Reported that \$50,000 to \$75,000 will be invested.

Jackson, Tenn., is considering the construction of a sewerage system. J. L. Wisdom or W. P. Robertson can give particulars.

The Etna Coal & Coke Co., of Chattanooga, Tenn., have leased additional coal land, and will open a new mine, putting in machinery, &c.

It is rumored that a new machine shop will be erected in Cleveland, Tenn.

Stivers & Woodburn, Chattanooga, Tenn., are reported as intending to erect a new planing mill.

T. F. Wood, Bristol, Tenn., is improving his flour mill and putting in new machinery.

E. Zimmerman and J. J. Turner have purchased land at Coachtown, Tenn., and will lay out a town. It is reported a spoke and handle factory will probably be started there.

TEXAS.

Incorporated in Texas: The Gainesville, Henrietta & Western Railway Co., office, Gainesville, Texas, to build a 130-mile railroad. Incorporators.—T. M. Daugherty and J. M. Lindsay, Gainesville; R. C. Foster and Samuel Hanna, Denison, and others.

The St. Louis, Arkansas & Texas Railroad (office, St. Louis) have signed contract to build round-house and machine shop at Sherman, Texas.

Chas. Wright, of Philadelphia, is reported as intending to build coke ovens near Laredo, Texas.

It is rumored that a round-house and machine shop will be started at Cleburne, Texas, by the Atchison, Topeka & Santa Fe R. R. (office, Topeka, Kan.)

The Southern Pacific Railroad (A. C. Hutchinson, New Orleans, general manager) are reported as contemplating an early commencement of work upon their proposed shops at Houston, Texas.

The Dallas City Street Railway Co. has been organized at Dallas, Texas, with a capital stock of \$200,000, to extend the lines of roads now in operation.

Work has been commenced at Paris, Texas, on the Paris & Great Northern Railroad.

M. P. Kelly, Texarkana, Texas, it is reported has received contract for building the water works in Sherman, Texas, previously reported.

It is proposed in Paris, Texas, to issue \$30,000 of bonds with which to build a city hall and a school.

The St. Louis, Arkansas & Texas Railroad (S. W. Fordyce, St. Louis, manager) will build a branch 120-mile road from Mt. Pleasant to Sherman, Texas.

VIRGINIA.

Arrangements are being made for developing an iron ore mine near Castleman's Ferry, Va.

The Norfolk County Lumber Co. has been organized in Virginia, with Gurden H. Wilcox, of Washington, D. C., secretary and general manager, and Lewis Claphane, of Washington, treasurer, to manufacture lumber, etc. Capital stock not to be less than \$20,000.

Kingley Bros., Hamilton, Va., propose to build a creamery at Warrenton, Va.

Jas. B. White & Co., Pittsburgh, Pa., have not purchased the manganese land near Waynesboro, Va., as reported last week, but leased it for development.

A committee has been appointed to investigate the expediency of lighting Staunton, Va., with electric lights. W. P. Tams, Staunton, can give particulars.

R. G. Wright, Waynesboro, Va., has purchased a site for his creamery, and will build at once.

WEST VIRGINIA.

The La Belle Iron Works, Wheeling, W. Va., will make considerable improvements to their works.

The Empire Axle Manufacturing Co., has been incorporated in West Virginia by Nelson Williams and Henry Walkeys of Syracuse, N. Y., and others.

J. A. Lutz, J. G. Hudson and others, have organized at Lewesburg, W. Va., the Greenbrier Creamery Co., paid-up capital \$1,500, to establish a creamery.

Wm. Johnson, Crescent, W. Va., is building 30 coke ovens.

BURNED.

Machinery of S. Creed's mill at Johnston, N. C., damaged by boiler explosion.

The machinery of the Columbia Water Works Co. damaged by boiler explosion.

J. E. Lucas, Palatka, Fla., will put up steam machinery for sawing wood.

Investigating Electric Lights.

STAUNTON, VA., July 24, 1886.
Editor Manufacturers' Record:

The City Council has appointed a special committee (of which the undersigned is chairman) to enquire into the expediency of the city's establishing an electric light plant, with a fair possibility of the committee reporting favorably on the scheme.

W. P. TAMS.

LOCKWOOD, GREENE & CO. MILL ENGINEERS

Office, 65 Westminster St., Providence, R. I.,

Carefully prepared plans, specifications and estimates furnished for the construction, equipment and organization of new mills and the revision and improvement of old.

A Big Flour Mill.

GALVESTON, TEXAS, July 21, 1886.

Editor Manufacturers' Record:

We are now about to commence work on our new mill, which will be a full roller, first-class in every respect, and which will give us a daily capacity of 800 barrels of wheat flour and 50 barrels of rye flour. We will also put up a large grain elevator of 300,000 bushels capacity; also a large fire-proof warehouse and a boiler and engine house, and will place therein Heine safety boilers and a Buckeye automatic engine of 300 horse-power. The John T. Noye Manufacturing Co., of Buffalo, N. Y., have the contract for the mill at a total approximate cost of \$150,000. The site for these structures is 120x300 feet, with ample railroad and marine facilities for loading and unloading.

J. REYMERSHOFFER, President.

A \$50,000 Electric Light Co.

CHARLESTON, S. C., July 23, 1886.

Editor Manufacturers' Record:

We have just organized "The Charleston Electric Light Co." with a nominal capital of \$50,000, and expect to have the light ready by October 1st, this year. The electric plant is the Thompson-Houston Co. system. For steam plant we start with a Corliss engine, 20x48 cylinder, and two Hennessey boilers with 72-inch shell, 17-10 long. On the whole, we aim at having the best in the country of its size or kind. Part of the capital is local and part from other States. We expect to have in use at least 500 lights inside of two years.

P. P. TOALE.

Building Rice Mill.

NEW ORLEANS, July 23, 1886.

Editor Manufacturers' Record:

I am building a rice mill of eight pounders capacity on my premises, 73 Decatur and 16 Conti streets, and expect to have it running for a trial on or about the 10th of next month.

G. A. LANNAN.

HAMILTON, VA., July 26, 1886.

Editor Manufacturers' Record:

Our arrangements are now about perfected, and we intend to open a creamery at Warrenton about October 1st next.

KINGSLEY BROS.

Big Machine Shops.

PINE BLUFF, ARK., July 24, 1886.

Editor Manufacturers' Record:

We have the contract to build machine shops, &c., for St. Louis, Arkansas & Texas Railroad Company at this city. Work requires about a million and a half brick, 250,000 feet lumber, and will cover about 60,000 square feet. To be finished Dec. 1st.

R. G. ATKINSON & CO.

SPRINGFIELD, TENN., July 20, 1886.

Editor Manufacturers' Record:

We have consolidated with the Springfield merchant mill and will put in roller machinery.

DAVIS & OGBURN.

MOUNTAIN HILL, GA., July 22, 1886.

Editor Manufacturers' Record:

We are erecting a 3-story steam gin, and will commence adding to it a large grist mill. Messrs. J. M. & S. J. Asken are erecting a water gin.

J. M. CLINE & W. A. SMITH.

SALISBURY, N. C., July 24, 1886.

Editor Manufacturers' Record:

The first step toward obtaining water works for this place has been taken. I have no doubt that we will have a system erected as soon as it can be done; but the matter has not progressed far enough for me to be able to give you any details.

E. B. NEAVE.

Improving Cotton Mill.

OSSEPER COTTON MILLS.

GIBSONVILLE, N. C., July 26, 1886.

Editor Manufacturers' Record:

I have recently added to my former plant 60 Woods' looms and made many improvements, among which are an Edison incandescent plant of 150 lights, new steam heating arrangement, and now have my order in for 1,200 Whitin spindles and the necessary preparatory machinery, viz: 7 cards, 1 drawing, 1 coarse speeder, 2 fine speeders, 1 warper and linker, and 1 spooler, and am placing a new 100-horse-power Harris Corliss engine, and will soon put in one 80-horse-power boiler. JAS. N. WILLIAMSON.

BEAR, ARK., July 24, 1886.

Editor Manufacturers' Record:

We have recently put in a steam saw mill preparatory to building a new stamp mill for free-gold ores.

BEAM BROS.

A Boom Company.

KNOXVILLE, TENN., July 26, 1886.

Editor Manufacturers' Record:

Alex. A. Arthur and others have organized a boom company here and expect to go into logging very extensively. H. SAXTON, JR.

A Coal Prospecting Company.

JEFFERSON, TEXAS, July 19, 1886.

Editor Manufacturers' Record:

The stock in the Jefferson Coal & Prospecting Company has been all taken, \$5,000. We will organize in a few days, when a charter will be applied for. We intend to find coal.

W. T. ATKINS.

AUSTINVILLE, VA., July 22, 1886.

Editor Manufacturers' Record:

It is our intention to erect spelter works here when the Cripple Creek Railroad is extended to this point.

WYTHE LEAD & ZINC MINE CO.

CITY MILLS, BRISTOL, TENN., July 24, 1886.

Editor Manufacturers' Record:

I have improved my mill by the addition of some new cleaning machinery and purifier, and have made valuable changes in my bolts, &c., and am now running again.

T. F. WOOD.

LEWISBURG, W. VA., July 24, 1886.

Editor Manufacturers' Record:

We have organized the Greenbrier Creamery Co., and are erecting a brick building for the creamery, which will be completed in about two weeks. We shall use the De Laval separators. Our present capacity will be the product of 300 cows.

J. A. LUTZ, Manager.

SILVER CITY, ARK., July 20, 1886.

Editor Manufacturers' Record:

Col. E. R. Moffet, of Joplin, Mo., is erecting smelting works at Crystal Springs, some 14 miles from here. It is said that other works of similar character will soon be constructed in this immediate vicinity, but nothing tangible is yet in sight.

FRANK PEASE.

BEAUMONT, TEXAS, July 20, 1886.

Editor Manufacturers' Record:

We have put in new engine, 20x24, and will increase our capacity to 50,000 feet per day.

NONA MILLS CO.

HIGH POINT, N. C., July 22, 1886.

Editor Manufacturers' Record:

We have bought a 2-acre lot next to depot lot in Pittsboro, and are now moving our machinery there, preparatory to starting a shuttle block and spoke factory. It will be a branch only of our business here.

SNOW & COX.

Mining Manganese—New Fence Factory.

ATLANTA, GA., July 24, 1886.

Editor Manufacturers' Record:

I propose to open an extensive deposit of manganese ore in Polk county, Ga., and have put a force of hands at work, with a view to shipping 30 tons per day.

The Hackett & Rice Iron Fence Co. has just been organized in this city for the purpose of manufacturing wrought iron fencing similar, but superior, to the famous Ohio wrought iron fence.

W. H. HACKETT.

GAPVILLE, ARK., July 17, 1886.

Editor Manufacturers' Record:

We have just completed one of the finest flouring mills in North Arkansas; also, we have a saw mill and cotton gin, corn mill, &c., all in first-class running order and doing a good business.

COX & DENTON.

Railroad Machine Shop.

SHERMAN, TEXAS, July 23, 1886.

Editor Manufacturers' Record:

The St. Louis, Arkansas & Texas Road will build round-houses and machine shops here soon. A written contract has been signed to that effect.

C. N. BUCKLER.

Machine Shop.

DURHAM, N. C., July 22, 1886.

Editor Manufacturers' Record:

I will, in the course of two weeks, move into larger quarters. The building is now in course of erection near the railroad depot.

LEWIS BLOUNT.

RACE POND, GA., July 21, 1886.

Editor Manufacturers' Record:

We are now rebuilding our still and will have it completed in a few days.

BUNBAGE & MILLIKIN.

MINING NOTES.

By T. K. BRUNER, Salisbury, N. C.

DUNLAP MINE.

The Dunlap Mine is situated in Moore county, and is owned by C. C. Wade, Esq., and Mr. W. B. Wright, both of Troy, Montgomery county. The mine is a new one, and the ores from the present shallow depth are surprisingly rich—showing free gold in considerable quantity. The owners are contemplating putting the place in operation with a fairly adequate plant, probably ample for the ore body as far as it has been proved. The property is, or its present status indicates, a property of more than ordinary richness, and should have the attention of an experienced mining engineer, in order to bring about the best results.

STEELE MINE.

The Steele Mine is in Montgomery county, within two miles of Ophir Post-office. Capt. Cramer is superintendent. Work is progressing at the Steele with much vigor. A large number of hands are employed, and, in fact, is the scene of the most active operations in Montgomery county. They are turning out some bullion, but the amount is not given to the public. The mine has a history, and at one time was famous for the production of free gold in almost unheard of masses. The miners say that the gold in the rock held it together, though fractured by the blasting, it hung together. Of course, this was only the case in certain rich "chimneys." With this kind of a history the public is prepared to hear of at least a fairly remunerative output. Dr. H. H. Warner, the "safe man," of Rochester, N. Y., is one of the largest stockholders in the Steele, and a short time since paid a visit to the property. He is reported as being pleased

with what he saw, and certainly considers it a safe investment.

THE REYNOLDS MINE.

also in Montgomery county, is being worked with increased richness developing in the ore body. It is said that a man with one ordinary prospecting pan can wash out from three to five pennyweights of gold a day. This is remarkable for richness, as few gold bearing veins in situ yield such results, though it is quite common where the vein has been broken down, and the ores concentrated in gullies and branch beds. The vein is said to widen as depth is attained. Arrangements are being made to introduce machinery at an early day. C. C. Wade, Esq., of Troy, is interested in this property.

NEW DISCOVERY OF GOLD.

Mr. Hicks Crowell, the prospector, has just uncovered a very rich deposit of auriferous quartz 13 miles south of Salisbury, and just over the county line, within the borders of Cabarrus. Messrs. Miller, Crowell & Smith, of Salisbury, have taken hold of the property and will probably put up machinery. There are two veins within easy proximity, one three feet wide, and the other not exceeding one foot in thickness. They are both surface outcrops, and are new discoveries, having never been prospected prior to Mr. Crowell's discovery. The quartz on the surface is honeycombed and somewhat stained with iron oxides. Nearly all of the quartz shows free gold, some of it in considerable quantity. The pannings of this quartz and dirt indicates a value of from several hundred up to one thousand dollars to the ton. Some of the pannings are much richer than others, which accounts for the large variation. The ore has not been assayed, though it is probable that the assays would vary as much as the pannings. It would be unsafe to estimate the value before a mill test of several tons has been made. There is no doubt but that it is a remarkably rich find.

ICEHOUR MINE.

The Icehour Mine, in Cabarrus county, but belonging to the Gold Hill district, is being opened again. Some years ago the property was opened, but for lack of money no extensive work was done. No machinery has ever been erected on the place. Recent tests have demonstrated the value of the ore, and Mr. M. L. Holmes, of Salisbury, has bought an interest in the mine. It is probable that under this new impetus that the property may take a place among the active mines of the State at an early day.

A Fine Offer.

RALEIGH, N. C., July 24, 1886.

Editor Manufacturers' Record:

A town has recently been projected and laid out in Southwestern North Carolina by the officers of one of the strongest railroad companies South. Rare opportunity is given manufacturers who desire to establish works in the South. The co-operation of the railroad company is guaranteed, a location free of cost, and machinery transported from New York city at the expense of the projectors of the new town. The location is one of the healthiest South—about 900 feet above sea level. The surrounding section is well adapted to grain, grass and bright tobacco. Fruit culture, bee and poultry raising are very profitably carried on in the section. Persons who would like to learn more particulars of this desirable place can be furnished information by corresponding with J. T. Patrick, State commissioner immigration, Raleigh, N. C. NORTH CAROLINA.

CENTREVILLE, TENN., July 20, 1886.

Editor Manufacturers' Record:

Our company has already been organized and we are at work making necessary buildings, warehouses, &c. We aim to begin to operate this fall. THE CENTREVILLE PEANUT RECLEANING & STORAGE CO.

New Moulding Machine.

Among the improved machines brought out by the Egan Company, of Cincinnati, Ohio, is the moulder shown in the accompanying cut. It is built in a very substantial manner, and, while the manufacturers call it a 6-inch machine, they state that it is heavier and better able to stand up to severe work than many 7-inch machines. In fact, it can be fitted with 7-inch knives, and will do the

and arranged in such a manner that they are very quickly changed to any desired cut.

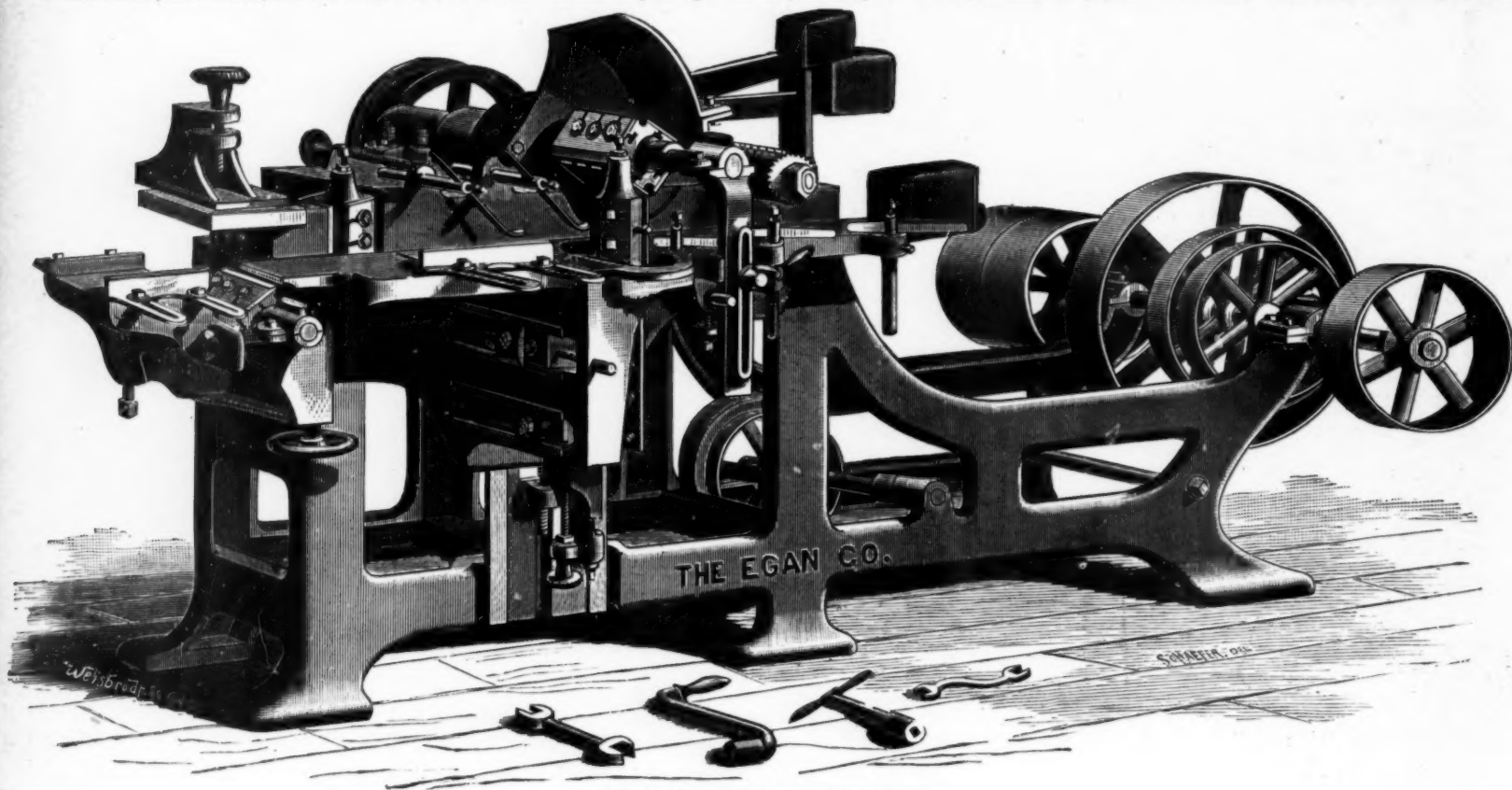
The table is raised and lowered by a crank handle on front side, and when table is set it is firmly clamped to the frame by a lock nut on the front side. The feed is very powerful and has double feed rolls, and the weights on each being independent the operator can increase or diminish the pressure at will, over friction roll in bed, and it can also be instantly changed from

the knife varies. The head has the necessary adjustments for thickness of cut, and can be raised or lowered.

THE News, of Blountsville, Ala., in stating its reasons for favoring a protective tariff, says:

Under a system of protection, we have seen the city of Birmingham spring into existence, and in a little over a decade of years acquire a thrifty, industrious popula-

quiescent, save occasionally, when floated to the breeze by the Hon. Henry Watterson or some other political crank who desired notoriety. Free trade and hard money were once shibboleths of the Democratic party, but the world is moving, and the party is not composed of fossils, but of live, energetic, progressive men. To advocate a moderate system of protection and a secure system of banking are no longer heterodox, nor the denunciation of them a proof of orthodox Democracy. Let us agree to disagree upon



IMPROVED SIX-INCH FOUR-SIDED MOULDER.

work of a 7-inch moulder. Among the various good points is the heavy outside bearing, which is now made to extend down to the floor, with a brace at bottom from main frame instead of as shown in cut. For further particulars of construction, etc.,

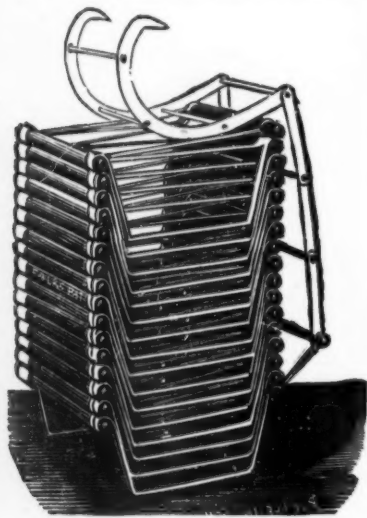


FIG. 1.

we append the following description from the company's catalogue:

Many new points of advantage and convenience are embodied in this machine, which will commend it favorably to the attention of all parties having use for a horizontal moulder to work one or more sides of lumber into any shape desired. The principal advantages claimed are:

- 1st. A very solid and stiff frame, designed for great strength and strain.
- 2d. Extra heavy steel mandrels, with long bearings and self-oiling boxes lined with genuine Babbitt metal.
- 3d. Extra long belts, securing great purchase on the driven spindles.
- 4th. Every head is accessible to the operator, and the adjustments very convenient

fast to slow at the will of the operator without stopping the machine. The capacity of this machine is extraordinary, working four sides six inches wide, and the table can be lowered fourteen inches.

The main spindle is extra heavy, being of 1½ inch steel, and carries the slotted steel head, and the boxes in which it rests are connected and slide in planed ways, having lateral adjustment across table with a screw. The outside bearing to main spindle is very perfect.

The feeds on this machine are fast enough for any kind of work and slow enough for

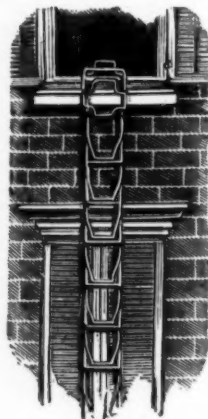


FIG. 2.

the finest smoothing. There are four changes and they are quickly made.

The heavy shaving bonnet can be swung clear of the main head, giving free access to the knives. It is adjustable and can be moved to or from knives, thus giving greater scope for the use of large moulding bits.

The under head on this machine is very quickly got at. The tail piece being hinged, and by loosening one screw it swings clear, giving free access to set or adjust, or sharpen the knives without removing them. There are adjustable lips in the table so as to increase or diminish the size of mouth as

tion of 25,000, while Selma, the Central City, founded a quarter of a century before, in the midst of the most fertile region of Alabama (the Black Belt), and the Alabama river affording it steamboat navigation all the year, still confined to a population of 8,000. Nor is this one-fourth of the goodly effects of this system. Look at Anniston, another young city just sprung into existence! Behold Calera, that in 1865 was a way station on the Selma, Rome & Dalton Railroad with the uneuphonious name of Limestone! Take a look at the newly founded city of Sheffield, already building furnaces, foundries and railroads!

Do quit your puling and whining; you are too young to indulge in such unseemly jeremiads. Cling to the undying principles of

non-essentials, and unite to defeat the political foe.

Fire Escape.

The Utility Folding Ladder & Fire Escape, of which we made mention a few weeks ago, is well illustrated in the accompanying engravings.

It consists of a swing ladder, with hickory rounds and wrought-iron links; between each pair of rounds is a light frame of iron which keeps the ladder out from the building. A double hook at the upper end sustains the ladder when in use. It can be folded into a very small compass, and weighs about ¾ pound to the foot, a 25-foot ladder occupying when folded a space 14x13x9 inches. The lightest ones made will readily hold a weight of 1,500 pounds. The

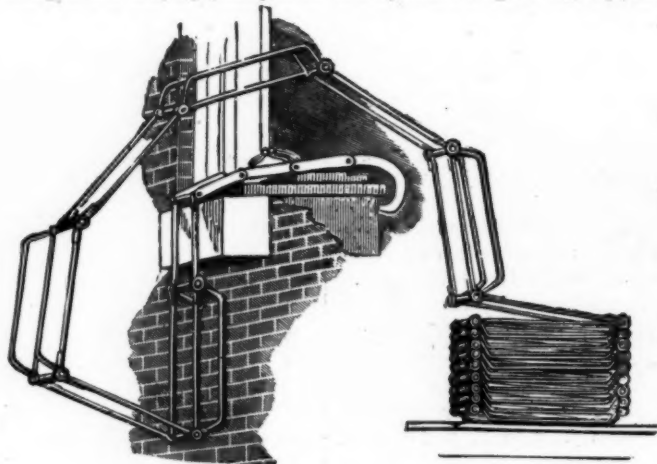


FIG. 3.

Democracy, but in heaven's name drop your traditionary lore and come down to common sense. Employ your energies and talents in building up your city by advocating the erection of manufactories of all sorts. Free Trade and Sailors' Rights was the banner borne by the Hon. Lewis Cass, of Michigan, in 1848, and Gen. Zachary Taylor and the Whigs floored it. Since then it has remained

heavier ones for mills, hotels, and public buildings will hold 2,500 pounds.

Fig. 1 shows the ladder folded. Fig. 2 shows the ladder as it appears on the outside of building ready for use. Fig. 3 shows the manner of passing it out of the window and the way in which it is secured on the outside.

These ladders are made by the Utility Folding Ladder Co., 23 Dey street, New York. Special ladders are made for asylums, schools, &c., with shorter steps.

Novelties in Brass Goods.

The John C. Jewett Manufacturing Co., Buffalo, N. Y., in addition to their patent refrigerators and water filters and their extensive line of water coolers, bird cages, japanned toilet ware, &c., also manufacture a large assortment of fine house-furnishing



FIG. 1.

goods in brass. A few of their styles, taken from the fall appendix to their catalogue for 1886, are shown in this issue of the MANUFACTURERS' RECORD. In their japanned ware, the extra hard japan they use gives a beautiful gloss, with a surface as smooth and hard as glass.

Fig. 1 is a japanned vase, with inside reservoir for coal. The surface presents a black ground with inlaid colors.

Fig. 2 is a plate warmer japanned and handsomely decorated. It has portable lust wire pie or plate holder.

Fig. 3 is a vase of polished brass, with inside reservoir for coal. This is an elegant

Some Facts on the Tariff Question.

From a minority report of the Ways and Means Committee on the House resolutions introduced by Mr. Grosvenor and Mr. Wilkins, of Ohio, one being for the restoration of the duty on wool as fixed by the law of 1867, and the other a resolution to continue the duty on wool as fixed by the law of 1883, both of which were reported back to the House adversely by the majority, we make the following extracts:

The majority of the committee endeavor to make it appear that there was greater agricultural prosperity during the period between 1850 and 1860, under a low tariff, than there has been at any period since. The

\$68,701,921 in 1847 to \$26,051,373 in 1850, and to \$21,848,653 in 1851, with a strong probability, amounting almost to a certainty, of a still further reduction in the current year.

The aggregate values of rice exported during the last fiscal year, as compared with the previous year, also exhibit a decrease amounting to \$460,917, which, with the decline in the values of the exports of tobacco for the same period, make an aggregate decrease in these two articles of \$1,156,751.

The policy which dictated a low rate of duties on foreign merchandise, it was thought by those who promoted and established it, would tend to benefit the farming population of the country by increasing the demand and raising the price of agricultural



FIG. 2.



FIG. 3.

experience of the farmers of the country will not, we are sure, corroborate this statement. In refutation of it we beg to quote from the message of President Fillmore of December 2, 1851, five years after the enactment of the low tariff of 1846. He said:

"The values of our domestic exports for the last fiscal year, as compared with those of the previous year, exhibit an increase of \$43,646,322. At first view this condition of our trade with foreign nations would seem to present the most flattering hope of its future prosperity. An examination of the details of our exports, however, will show that the increased value of our exports for

products in foreign markets. The foregoing facts, however, seem to show incontestably that no such result has followed the adoption of this policy."

This is the first year of the prosperous decade for the farmer to which the majority refer.

In 1852, in December, President Fillmore sent a message to the Thirty-second Congress, and after referring to the fact that he had called the attention of Congress a year before to the defects in the then tariff, which, if modified, would better promote the prosperity of the country, says:

"Nothing has since occurred to change

the farmer to that extent is deprived of a home market for the sale of surplus produce."

On December 8, 1857, after ten years of trial of the act of 1846, President Buchanan sent a message to Congress, in which occurs the following:

"The earth has yielded her fruits abundantly and has bountifully rewarded the



FIG. 4.



FIG. 5.



FIG. 6.

piece of furniture, and the vase shown is one of many designs.

Fig. 4 shows a style of coal hod of polished brass, in alligator pattern; and Fig. 5 is a wood holder of the same design.

The last cut, Fig. 6, is a representation of a brass umbrella stand, with polished alligator center, oxide band top and bottom, and antique wild rose ornament.

the last fiscal year is to be found in the high price of cotton which prevailed during the last half of that year, which price has since declined about one-half. The value of our exports of breadstuffs and provisions, which it was supposed the incentive of a low tariff and large importations from abroad would have greatly augmented, has fallen from

my views on this important question. Without repeating the arguments contained in my former message in favor of discriminating protective duties, I deem it my duty to call your attention to one or two other considerations affecting this subject.

The first is the effect of large importations of foreign goods upon our currency. Most

dantly and has bountifully rewarded the toil of the husbandman. We have possessed all the elements of material wealth in rich abundance, and yet, notwithstanding all these advantages, our country, in its monetary interests, is at the present moment in a deplorable condition. In the midst of unsurpassed plenty, in all the productions

and in all the elements of national wealth we find our manufactures suspended, our public works retarded, our private enterprises of all kinds abandoned, and thousands of useful laborers thrown out of employment and reduced to want."

The gloomy picture thus portrayed by those upon whom was imposed the duty, under the Constitution, of advising Congress of the condition of the country would not seem to confirm the statements or sustain the theories of the majority, but emphatically contradicts both.

Let us now give our attention to another line of reasoning found in the report and employed to sustain the position of our opponents.

The majority of the committee fall into a serious error in attempting to argue, by the use of percentage, that the agricultural progress of the country has been relatively less during the last twenty years than during the ten years preceding 1860. It is clear to any fair mind that in making comparisons of this sort the period of the war should be omitted. The history of the progress of every nation of the world has demonstrated the fact that the growth of each new decade, whether in population, wealth, production of the soil, or manufactures, has been attained with greater difficulty than the ones preceding it.

It is therefore quite possible, as in the case of the United States, that the actual figures show a growth of population and wealth unprecedented in the history of the world, and yet, were we to study these results by percentages alone, it would appear that we had retrograded. To illustrate, take for example the population of Ohio, which in 1800 was 45,365; in 1810, 230,760, an increase of 409 per cent.; in 1820 it had reached 581,434, a remarkable and healthy increase, you will say, but apply the test of the majority of this committee, and we find that the increase during this decade had been but 152 per cent. In 1830 this State had reached a population of 937,903, numerically a most satisfactory increase, but submit it to the percentage test and it is found to be but 61 per cent. In 1840 the population of Ohio had reached 1,519,467, an increase of 62 per cent.; in 1850 it was 1,980,329, an increase of 30 per cent.; in 1860 it was 2,339,511, an increase of 18 per cent.; in 1870 it was 2,665,260, an increase of 13 per cent., and in 1880 it had reached 3,198,239, an increase of 16 per cent.

Apply this method of reasoning to the population of the State of Ohio, or to any of our Western States, and we should find that, while the majority would be weeping over the fact that the per cent. of increase had decreased from 409 per cent. in the decade ending in 1810 to 16 per cent. in the decade ending in 1880, the world at large would be marveling at the tremendous increase of population in this State from 45,365 in 1800 to 3,198,239 in 1880. If the doctrine of percentages is to be the test of growth and population, then Ohio has been most unfortunate. Her percentage between 1800 and 1810, if continued, would have given her a population of over seventeen billions.

What is true in the case of population is equally true when applied to agriculture. Thus between 1870 and 1880 we find the increase in the production of corn in Ohio was about 66 per cent., while in Nebraska during the same period the increase was 1,279 per cent., and in Kansas 521 per cent. If the increase during the next decade in the State of Nebraska is to be figured by percentages, the production, by the method applied by the majority of the committee, would be 901,866,000 bushels of corn, or more than one-half of the total corn product of the United States in 1884.

What is true of the State of Nebraska is equally true of the United States. The percentage of growth in population and in wealth is always greater in the earlier periods of the history of a nation.

The facts show that our agricultural, manufacturing and commercial progress, under the present tariff law, has been satisfactory in the extreme. For example, the total production of cereals has steadily increased year by year from 1864, when it aggregated 916,427,263 bushels, to 2,992,881,500 bushels in 1884, an increase of over 2,000,000,000 bushels of grain. No jugglery with percentages can controvert facts of this kind; they are official. Such a progress is satisfactory and a pride to every American citizen, and a matter of surprise to every nation of the world.

The value and the number of our farm animals during this period have exhibited a growth under the protective tariff not less remarkable. In 1884 the total value of our farm animals was, according to the statistics of the agricultural bureau, as follows:

Horses.....	\$ 833,734,400
Mules.....	161,914,976
Cattle.....	1,106,715,703
Sheep.....	119,924,706
Swine.....	246,301,139

Total.....\$2,467,868,924

According to the census of 1870 the total value of farm animals at that time was \$1,525,276,457, this being the currency value. The gold value would have been \$1,220,221,165, showing a gain from 1870 to the present time of \$1,247,647,759, an increase of 102 per cent.

The increase in the number of our farm animals during the decennial periods ending in 1850, 1860, 1870 and 1880 has been as follows:

	1850.	1860.	1870.	1880.
Horses...	4,335,719	6,249,174	7,145,370	10,357,488
Mules....	519,231	1,151,148	1,125,415	1,812,808
Cattle....	1,778,907	25,620,019	23,820,608	35,925,511
Sheep....	1,723,220	29,471,275	28,477,951	35,192,074
Swine....	30,354,213	33,512,867	25,134,369	47,681,700

These figures only include the stock on farms exclusive of ranches. Were animals on ranches included the cattle and sheep of 1880 would be largely increased, and those of 1870 slightly. At the other dates the ranch interest was scarcely appreciable.

From cereals and live stock we turn to cotton, and find that the production has increased from about 1,000,000,000 pounds to nearly 3,000,000,000 pounds during the period under consideration. That the tobacco crop has steadily gone up from 185,000,000 pounds in 1865 to 541,504,000 pounds in 1884. Surely there is nothing to indicate that this is not a healthy growth, though it would be easy enough to show a decrease by percentages.

From the products of the soil to the products of the mine is but a step, for all add alike to the wealth and prosperity of the country. Here we find that in 1860 the coal product of the country was 15,000,000 tons; in 1870 it was 33,000,000 tons; in 1880, 70,500,000 tons; in 1881, 77,000,000 tons; in 1882, 88,000,000 tons; in 1883, 96,000,000 tons, and about 100,000,000 tons in 1884.

Our iron-ore mines in 1860 produced, according to the census reports, 900,000 tons; but the stimulus of protection has brought up the annual yield to more than ten times that amount, the present product being but little short of 10,000,000 tons per annum. The pig iron produced has increased from 1,305,000 tons in 1867 to 4,500,000 tons at the present time. Our production of steel rails has increased since 1867 from 2,277 tons to 1,225,000, or 1,500,000 tons for the coming year.

In short, the progress made in all lines of industry under a protective tariff has been greater than in any other period of our own history, and greater than the progress of any other country in the world.

We lead every other nation. In 1880 our agricultural products were valued at \$3,020,000,000; while Russia, with her immense territory and double our population, was only \$2,545,000,000; Germany, \$2,280,000,000; France, \$2,220,000,000; Austria, \$322,000,000. We produce 30 per cent. of the grain of the world.

This statement of the growth and development of agriculture demonstrates that protective tariffs have not obstructed agricultural prosperity.

Machinery Wanted.

HICKORY, N. C., July 20, 1886.

Editor Manufacturers' Record:

We want to purchase a good bolt cutting, tapping and heading machine, with attachments for threading and tapping thimble skeins for farm wagons. Will be pleased to receive quotations from your subscribers.

CAROLINA FOUNDRY CO.

CONCORD, N. C., July 19, 1886.

Editor Manufacturers' Record:

We have ordered machinery, and will open a spoke and handle factory in a few weeks.

O. L. HUFF & D. C. WARNER.

ASHLAND, KY., July 21, 1886.

Editor Manufacturers' Record:

I understand that the Ashland Coal & Iron Railway Co. intend building an additional track to their furnace in a short time.

R. W. LAMPTIN.

WAYNESBORO, VA., July 23, 1886.

Editor Manufacturers' Record:

I will commence work building a creamery next week.

R. G. WRIGHT.

DALTON, GA., July 22, 1886.

Editor Manufacturers' Record:

The city will vote in a few days as to whether or not to build the water works, and, if they vote it down, I shall proceed to organize a stock company to build them.

J. H. KENNER.

How to Advertise.

A contemporary in some "hints on advertising," says: "Another thing which publishers have to contend with is that the results of advertising are not always visible to patrons, many of whom cannot understand why custom cannot be directly traced to the source where they expended their money to obtain it. Business is like a river with many tributaries, and in which it is impossible to trace every individual drop of water to the spring from whence it came. But if a journal is selected for advertising purposes that reaches time and again the persons most likely to be interested in the solicitation, that paper is certainly a sure fountain-head of profitable trade in the stream of patronage far below. Temporary advertisements in a small way will not produce an immediate or permanent increase of business any more than a light shower will affect the depth of water in a well, but by persistency in the use of printer's ink in the right direction the results sought will be gained in the end with interest."

Valuable Coal Lands FOR SALE.

Fifty thousand acres of carefully selected coal lands, located in the Black Warrior river coal fields of Alabama, beginning about 8 miles from Tuscaloosa, on both sides of the Black Warrior river, which is now navigable from Tuscaloosa to Mobile, and which the U. S. government is now engaged in making navigable to and above these lands. The Georgia Pacific Railroad is now being built to run through the lands, and another road is being surveyed.

The coal is of excellent quality, and in good, workable seams.

The lands are well timbered with yellow pine, oak, hickory, &c.

These lands are conceded to be among the best in the State, and are offered at a price that makes them very desirable, either for development or investment. The owners will sell a controlling interest, but wish to retain at least a fourth interest.

For further information, maps, &c., call on or address

GEO. E. RICHTER,

Office of the Griffin Manufacturing Company, 92 Liberty St., NEW YORK.

BEAUDRY'S UPRIGHT CUSHIONED

Power Hammer,

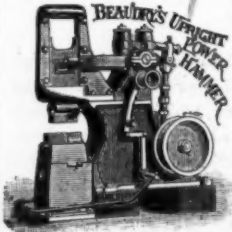
BY FAR THE BEST!

Blow accurate, powerful and elastic. Will increase the profits of any shop.

70 Kilby St.,

BOSTON, MASS.

Beaudry & Cunningham.



SITUATION WANTED.

Young Man thoroughly competent to take charge of a locomotive on narrow gauge or other road. Well up in repairing. Highest references as to character and experience. Address H. L., care MANUFACTURERS' RECORD.

NORTHERN AND ENGLISH MARKETS

SOUTHERN REAL ESTATE

Agricultural, Timber, Grazing and Mineral Lands; also Manufacturing Properties.

CLARENCE CORDON,

Member of the Real Estate Exchange and Auction Room, (Limited.)

50 LIBERTY STREET, NEW YORK.

Agencies in Boston and London.

This business furnishes favorable opportunity to SOUTHERN SELLERS, whilst it brings reliable INVESTMENT TO CAPITALISTS by a system that refuses to handle property that will not submit to examination and report by experts of this office; thus providing in the best markets full, skilled and guaranteed description of distant offerings. Expert examiners at various Southern points. Circulars on application. Correspondence invited.

Mention Manufacturers' Record when writing.

Cotton Seed Oil Mill and Ginnery FOR SALE.

Capacity twenty tons per day. Titles perfect. A fine and valuable property, in the town of Pittsburgh, Texas. For particulars, address,

E. VAN WINKLE & CO., Atlanta, Ga.

For Sale, Cheap.

4,000 ft. 3 in. & 52 ft. 6 in. Gas Pipe.

Has been used only 6 months for conducting water. Will be sold in any quantity.

Geo. H. Cornelison, Orangeburg, S. C.

FOR SALE.

AN ESTABLISHED BUSINESS and a splendidly built two-story brick building erected expressly for it. Fine opening for a man of small means, who wants to engage in the manufacturing, repairing and selling of buggies, wagons, plows, etc. Reason for selling: Desire to engage exclusively in the manufacture of farm wagons for the wholesale trade. Apply or write to Owensboro Wagon Manufacturing Co., Owensboro, Ky.

65-HORSE-POWER

HORIZONTAL, STATIONARY

STEAM ENGINE FOR SALE!

Second-hand, but warranted good as new. Will be sold cheap for cash. Address,

W. C. BUCHANAN, Lancaster, Pa.

Wanted!

A practical machinist, with some capital, to take partnership and entire charge of a machine shop equipped with new tools. A foundry, doing a large business, will be run in connection with same. Address MURRAY & STEVENSON, Anniston, Ala.

FOR SALE.

Second-hand engines at the following bargains:

	Price.
*1 20 x48 engine and 18 ft. fly-wheel.	\$ 950
*1 15 x30 " " " " "	700
*1 16 x36 " " " " "	1,225

*Plain slide valve. †Putnam Automatic Cut-Off.

Delivery F. O. B. Columbus, O. Address

COLUMBUS MACHINE CO.

Columbus, Ohio.

COMMON SENSE ENGINES.




Simple, durable, economical, perfect, fully guaranteed. All engines from 6 to 25 H. P. Send for illustrated Catalogue. Agents wanted everywhere.

Best CORN MILL in the World for plantation and farm purposes.

Stationary Engines from 6 to 100 Horse Power. Portable from 6 to 25 H. P.

COMMON SENSE ENGINE CO., Springfield, Ohio.

Business Chances.

42-For the purpose of making the **MANUFACTURERS' RECORD** a still more valuable medium of communication between its readers North and South, we will publish, **FREE OF CHARGE**, short advertisements, not exceeding 40 words, from those in the South who have good business openings that they wish to bring to public notice, capital wanted for industrial enterprises, &c., &c.; while readers in other sections who desire to engage in manufactures at the South are also invited to use these columns, without cost, either in seeking information regarding the advantages and special claims of different localities, or for asking about good openings for men and money. This department is also free for Southern manufacturers who wish to advertise for mill managers, superintendents, engineers, &c.

In corresponding with any of these advertisers please mention the **Baltimore Manufacturers' Record**.

Parties advertising in this column must have replies sent to their own address, and not to care of Manufacturers' Record, unless stamps are sent for forwarding replies. Advertisements sent not in accordance with this requirement will not be inserted.

WANTED.—Purchasers for 25 building lots (50x150) in the beautiful and growing town of Luray, immediately on the line of the S. V. R. R., 125 miles south of Baltimore. Address E. A. Wilson, Luray, Va.

IRON MINE and water power for sale. Situated in the finest section of North Carolina in Surry county, on the C. F. & Y. V. Railroad. For information address, H. C. Brown, Mt. Airy, care of J. T. Patrick, Raleigh, N. C.

WANTED.—A partner with \$5,000 to take half interest in an established business (manufacturing a staple article), having good trade in five States, paying 50 to 75 per cent. profit. Capital needed to extend business. Address, with references, J. B. Holmes, Atlanta, Ga., or James G. Holmes, 60 Buchanan's Wharf, Baltimore, Md.

FOR SALE.—The right to cut the timber from 40,000 acres of land, heavily timbered, (with good facilities for handling,) lying in a solid body in Burke county, N. C. Apply to Piedmont Lumber Ranch & Mining Co., Piedmont Springs, N. C.

PURCHASER WANTED for the waste of a shuttle mill; pieces of dogwood, useful for a variety of purposes, but too small for shuttles. Address W. N. C., care **MANUFACTURERS' RECORD**.

OPPORTUNITY.—Riverside Station, Shenandoah Valley Railroad, Rockbridge county, Va., is a good point at which to locate any manufacturing enterprise working wood and iron material. Arrangements can be made for water power if desired. Address J. C. Shields, Staunton, Va.

FOR SALE.—The Winchester Foundry and Machine Shops, situated in the Valley of Virginia. Capacity for 20 to 30 men. Largest collection of patterns in the State. Machinery running and in good repair. Town has 6,000 inhabitants. Sell because of ill-health. Address, William T. Gilbert, Box 195, Winchester, Va.

A PRACTICAL MAN has money to invest along with some local capital in building and operating an ice factory in any good locality in the South. Would like to receive information as to places where there is an opening. Address, Bristol, care **MANUFACTURERS' RECORD**.

SITUATION wanted by a practical machinist, engineer, sawyer and saw filer. Address, J. B. Thomas, Melfon, Ga.

IRON FURNACE FOR SALE.—One of the most desirable charcoal furnaces in Virginia, located in Wythe county, will be sold on liberal terms; abundance of fine ores, water and timber. Address J. A. Walker, Wytheville, Va.

I HAVE an orchard of six hundred young bearing apple trees, which I would like to put into a partnership for conducting a fruit and nursery business. There is an abundance of land for extension of the orchards. I have also fine lands for trucking. Location, Riverside Station, Shenandoah Valley Railroad, Rockbridge county, Va. Address J. C. Shields, Staunton, Va.

WANTED.—A competent machinist who is qualified to conduct a foundry and machine shop, and comes well recommended, can purchase an interest in a well-established business at a bargain and secure constant employment. For particulars address F. B. Alexander, Hickory, N. C.

FOR SALE.—Ten acres of land fronting on side tracks of the Alabama G. S. Railroad, at Tuscaloosa. Suitable for furnaces, foundries, machine shops, mills, &c. Plenty of water near the surface. Fine climate, and healthy. Within 25 miles of the finest iron ore, lime-stone and coal in Alabama. Low rates guaranteed on raw materials. Correspondence solicited. Address, F. P. Turner, Tuscaloosa, Ala.

FOR SALE.—A splendid water power in Alabama, 12 miles southwest of Anniston, 3 miles south of a depot on the G. P. Railroad, 3 miles west of a depot on the E. T. V. & G. Railroad and A. & A. Railroad. A splendid location for cotton mill, 250 horse-power. Banks and bottoms rock; never failing stream, etc. Address, C. H. Simmons, Munford, Ala.

WANTED.—Practical man for spoke and handle factory; also location for same in Virginia, North or South Carolina or Georgia. Address, E. Maxwell, Carter's Mills, N. C.

FOR SALE.—50 shares factory stock. Average yearly dividends about 9 per cent; also has accumulated surplus of 33 per cent, during past 3 years, which is invested in additional buildings and machinery. Outlook excellent, and price very reasonable. Address, Lock Box 144, La Grange, Ga.

RARE OPPORTUNITY.—Pollard, Escambia county, Alabama, on the L. & N. R. R. and Conecuh river, possesses rare advantages for spoke and handle, barrel, bucket, or any enterprise for manufacturing wood work. Every variety of wood in abundance. Splendid facilities. Correspondence solicited. J. C. Witt, Pollard, Ala.

WANTED.—A man thoroughly competent in general iron work and one capable of superintending a number of men. Address, W. T. Bradford, Springfield, Ohio.

A FINE BUSINESS CHANCE IN CHATTANOOGA.—The undersigned, having gone into the manufacture of canned goods, will sell their old established jobbing business strictly at cost. Small stock at present. No charge for good will. Old traveling men retained and we take all book accounts ourselves. Established since 1870. We sell in Tennessee, Alabama, Georgia, Kentucky and Mississippi. Small capital only required. Apply to J. Seeman & Co., wholesale confectioners and tobacconists, Chattanooga, Tenn.

WANTED.—A Partner with \$3,000 or \$4,000 to take an interest in a sash and blind factory with planing mill attached. Good opening for a good man. Would prefer a first-class architect competent to superintend work. Address J. W. C., care **MANUFACTURERS' RECORD**.

THREE-FIFTHS interest of Pen-Rhyn State Quarry, Washington county, Va., will be sold for \$5,500 cash. Quarry on South Holston river, shows face over 80 feet above water, even and smooth. The best slate for large sizes ever discovered. Remaining interests can be bought. Apply to C. R. Boyd, Wytheville, Va.

WANTED.—Good machinist to take charge of general repair shop; thoroughly competent to repair engines, boilers and general machinery. Also, correspondence with man thoroughly posted in hub, spoke and handle manufacturing. T. T. Windsor & Co., 23 and 25 Wayne street, Milledgeville, Ga.

LIBERAL.—Green Forest, Va., offers fine improved water power and site free to any who will erect and run woolen, paper, cotton, or any other mills working 20 hands or more. Two railroads; plenty raw material. Address B. C. Moomaw, Green Forest, Va.

THE Talladega Oil Mill & Public Ginney is offered for sale, or would form a stock company for manufacture of fertilizers and soap. Correspondence solicited. W. E. Yancey, Talladega, Ala.

VALUABLE COAL PROPERTY FOR LEASE in Montgomery county, Va., two miles from railroad. Address Chas. C. Kasey, New River Depot, Va.

WANTED.—A practical paper manufacturer with some capital, to assist in running a paper mill for working refuse sugar cane fibre. Mill is erected and in running order, on a large sugar plantation, on railroad and river in Louisiana. Address K, Box 3,330, New Orleans, La.

MECHANICAL ENGINEER and draughtsman competent and reliable, experienced on machine tools, hoisting machinery, turbines, mining machinery, etc., desires situation. Address, Peta, P. O. Box 228, Torrington, Conn.

SITE FOR COTTON MILL.—90 acres of land just outside corporate limits of Atlanta, well drained, has water facilities for steam, lies alongside of railroad. Charter obtained; owners will place a fair valuation on the land, taking stock for same. Parties contemplating building cotton mill, address James W. Harle, Atlanta, Ga.

WANTED.—A partner to take interest in fruit and nursery business. Address, E. E. Forsyth, Raleigh, N. C.

WANTED.—A partner with \$2,000 capital in a handle factory, now established with good trade; have a good water power. Timber very cheap and location good. Address G. W. Simpson, Salisbury Furnace, Botetourt county, Va.

A GREAT BARGAIN is offered to close out a smoking tobacco factory, well equipped, extensively advertised, with the brand of goods popularly known and handled by a large trade throughout the Southern States. Apply to F. B. Alexander, Hickory, N. C.

METAL-WORKING MACHINERY

New and Second Hand, on Hand.

12 in. S. x 3 ft. Engine Lathes.
15 in. S. x 6 ft. Engine Lathes, Lathe & Morse.
16 in. S. x 6 & 8 ft. Engine Lathes, Harrington & Ames.
17 in. S. x 7 & 8 ft. Engine Lathes, Hewes & Phillips.
18 in. S. x 8 & 10 ft. Engine Lathes, New Haven.
20 in. S. x 8, 10 & 14 ft. Engine Lathes, Harris & Ames.
24 in. S. x 14 & 20 ft. Engine Lathes, Ames.
25 in. S. 10 ft. Engine Lathes.
26 in. S. x 16 ft. Engine Lathes, Perkins.
41 in. S. x 18 ft. Engine Lathes, Putnam.
30 in. in Cap Extension Bed Engine Lathes, Box.
12 in. Stroke Shapers, New Haven & Eungst.
15 in. Stroke Shapers, Wolcott & Eberhardt.
20 in. Stroke Shapers, Eberhardt.
24 in. Stroke Shapers, Bridgeport.
20 in. x 20 in. x 4 ft. Planer, New Haven.
20 in. x 20 in. x 6 ft. Planer, Whitcomb.
20 in. x 20 in. x 6 ft. Planer, Pratt & Whitney.
22 in. x 22 in. x 4 ft. Planer, Powell.
22 in. x 22 in. x 5 ft. Planer, Ames.
24 in. x 24 in. x 4 ft. Planer, Ferris & Miles.
24 in. x 24 in. x 6 ft. Planer, Powell.
24 in. x 27 in. x 7 ft. Planer, Ames.
26 in. x 26 in. x 6 ft. Planer, Powell.
26 in. x 26 in. x 6 ft. Planer, Putnam.
30 in. x 30 in. x 10 ft. Planer, National.
20 in. Swing Drill, Prentice.
25 in. Swing Drill, Blaisdell.
28 in. Swing Drill, Blaisdell.
3 and 4 Spindle Drill, Garvin.
Brown & Sharpe Universal Miller.
Plain Miller, Lincoln Pattern.
No. 3 Miller, Garvin.
No. 5 Miller, Brainerd.
2½ in. Cutting-off Machine, Pratt & Whitney.
No. 2-3½-4 Stiles Punch Presses.

Also a line of New Tools all kinds. We are always glad to correspond, and if parties desiring to purchase will write, stating just what they want, we will be glad to name prices on either new or second hand.

E. P. BULLARD,

No. 14 Dey Street, New York.



Wm. Chisholm & Sons

MANUFACTURERS OF

SOLID CAST STEEL

Shovels, Spades,

SCOOPS,

AND COAL SHOVELS

Cleveland, Ohio.

These goods are the acknowledged standard wherever there is hard work to be done, and are recommended for RAILROAD, MINING, FURNACE and CONTRACTORS' USE IN GENERAL.

—Send for Catalogue.—

SPARGER'S White Heat Steel Welding Compound.

- ☞ It is superior to borax or anything else.
- ☞ It will weld steel to steel as easily as iron is welded to iron.
- ☞ It will restore steel when burned.
- ☞ It both welds and refines at the same time.
- ☞ It never misses welding when heated hot enough.
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Any tool cracked in tempering can be welded by one application, and I positively guarantee that steel will not crack after it has been worked in the compound. Testimonials of its efficacy in hand from practical machinists in New York, Pittsburgh, Newark and other cities. Sold in bulk at 5 cents a pound. Address

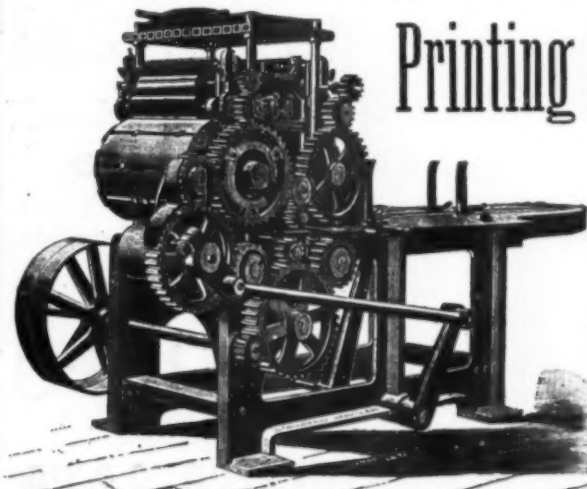
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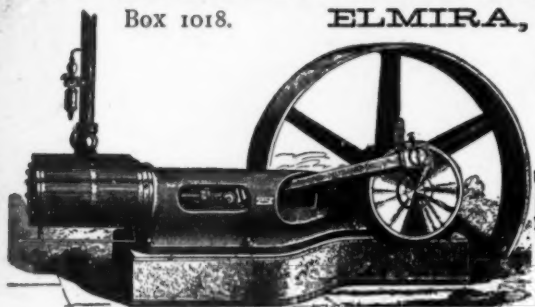
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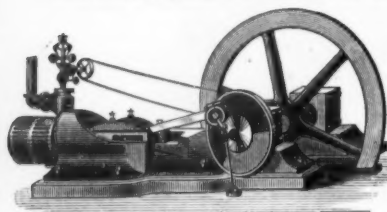
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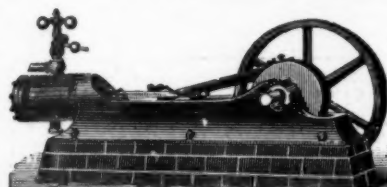
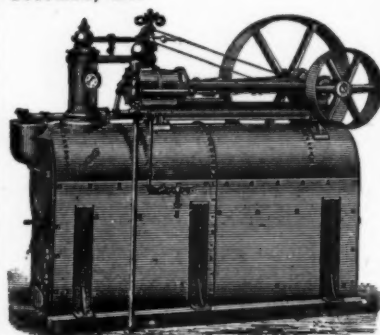
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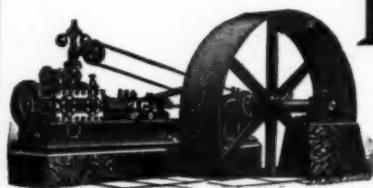
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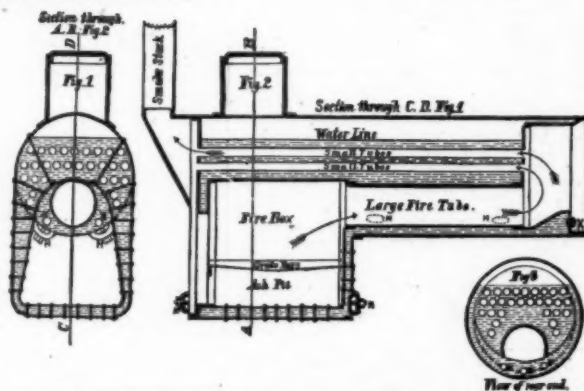
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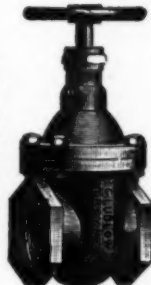
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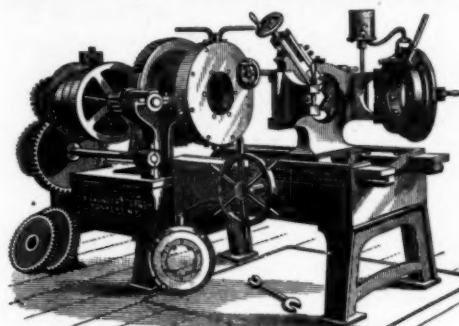
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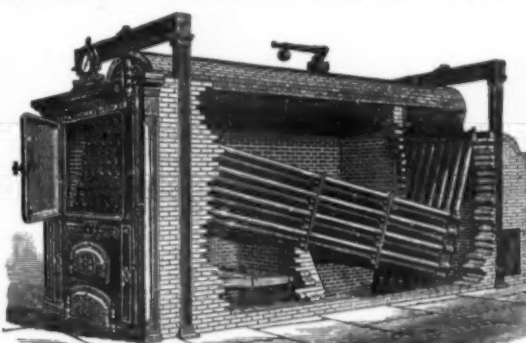
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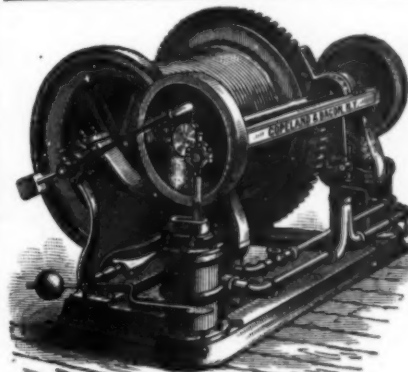
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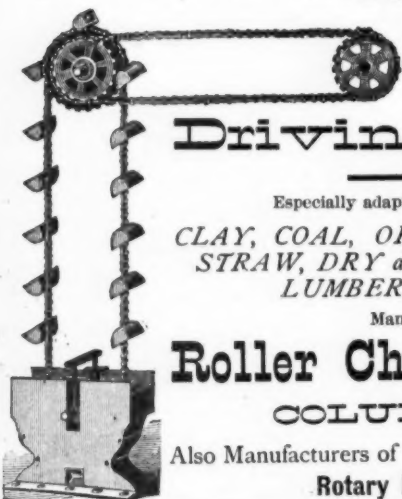
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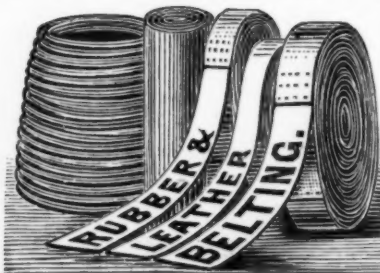
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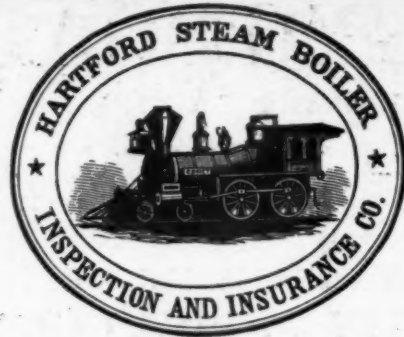
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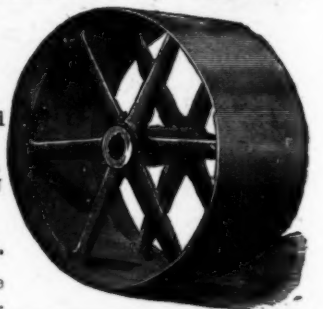
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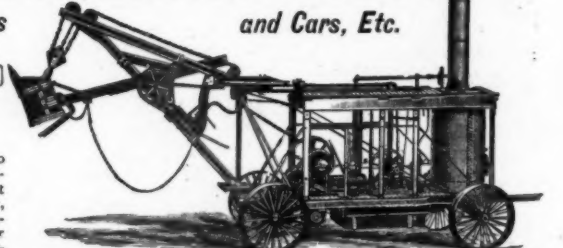
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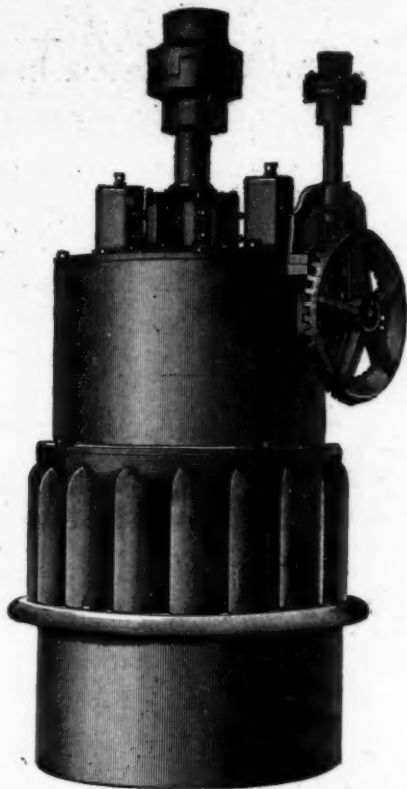
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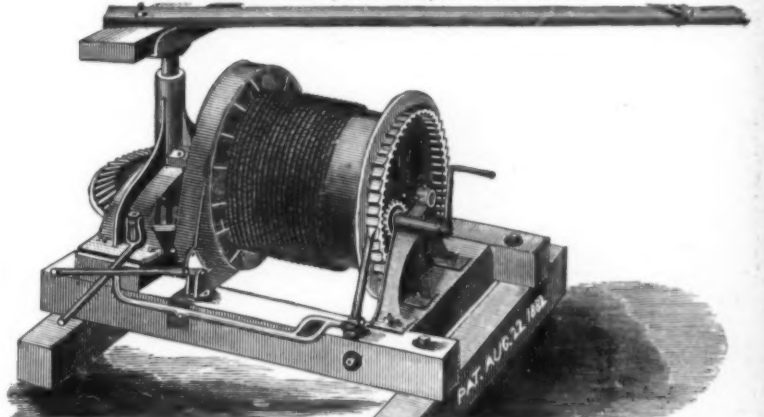
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Champion Cylinder Oil.	Extra Lardoleum Oil.	Neatsfoot Oil.
Globe Cylinder Oil.	Sperm Machine Oil.	Miners' Oil.
Champion Engine Oil.	Golden Machine Oil.	Red Rose Electric Oil.
Buckeye Engine Oil.	Dark Oils (Summer & Winter.)	Crystal Dew Drop Oil.
Prime Engine Oil.	Buckeye Harness Oil.	Head Light Oil.
Extra Engine Oil.	Sperm Signal Oil.	Naphtha.
White Castor Machine Oil.	Axle Grease.	Gasoline.

PAINTS, OILS, &c.

PAINTS.

Black Lamp, coach painters..... 1 lb 20c
Black Lamp, ordinary..... 1 lb 40c
Black Ivory Drop, fair..... 12@15c
Black Ivory Drop, best..... 20c
Black Paint, in oil..... kegs, 6c; assorted cans, 9c
Blue Prussian, fair to best..... 30@40c
Blue Prussian, fair to best, in oil..... 35@40c
Blue Chinese, dry..... 70c
Blue Ultramarine..... 12@25c
Brown, Spanish..... 1c
Brown, Van Dyck..... 5@15c
Green, chrome..... 8@15c
Green, chrome, in oil..... 9@15c
Green, Paris..... good, 20c; best, 25c
Green, Paris, in oil..... good, 20c; best, 25c
Iron Paint, bright red..... 1 lb 15c
Iron Paint, brown..... 1 lb 15c
Iron Paint, purple..... 1 lb 3c
Iron Paint, ground in oil, bright red..... 1 lb 5 1/2c
Iron Paint, ground in oil, red..... 1 lb 5c
Iron Paint, ground in oil, brown..... 1 lb 4 1/2c
Iron Paint, ground in oil, purple..... 1 lb 6c
Linseed Oil, raw..... 44c
Single Boiled..... 46c
Double..... 48c
Mineral Paints..... 2@4c
Orange Mineral..... 10c
Red Lead, American..... 6 1/2@7c
Red Venetian, (English) dry..... \$1.50 to \$1.75
Red Venetian, in oil..... assorted cans, 9c; kegs, 6c
Red Indian, dry..... 8@12c
Rose Pink..... 10@13c
Sienna, American, raw..... 4c
Sienna, burnt..... 4c
Sienna, burnt, in oil..... 5c
Sienna, raw..... 8@15c
Umber, burnt..... 4@8c
Umber, burnt, in oil..... 8@14c
Umber, raw..... 3 1/2@7 1/2c
Umber, raw, in oil..... 8@14c
Vermilion, Chinese..... 90c
Vermilion, English..... 60@65c
Vermilion, American..... 15@18c
White Lead, American, pure dry..... 7c
White Lead, American, pure in oil..... 6 1/2@7c
White, Paris, English, prime..... in brls. 1 1/2@3c
Yellow Ochre, French..... \$1.75
Yellow Ochre, French, in oil..... asst'd cans, 9c; kegs, 6c
Yellow Ochre, American..... in brls. 1 1/2@1 1/2c
Yellow Chrome..... 8@18c
Yellow Chrome, in oil..... 9@12@18c
Zinc White, American, No. 1, dry..... 6@7c
Zinc White, American, No. 1, in oil..... 6 1/2@9c
Zinc White, French dry..... 9@12c
Zinc White, French in oil..... 10@14c

OILS.

Bleached W. Sperm oil..... 95@100
Nat..... 92@95
B. W. Elephant oil..... 70c
" Whale oil..... 48@50
Prime Lard oil..... 50@52
Extra No. 1 Lard oil..... 48@50
Lubricating oils..... 70@95
Miners' oil..... 35@40
W. Pressed Fish oil..... 30@32
Neatsfoot oil..... 50@75
Steam-refined Cylinder oil..... 30@40
Best Filtered..... 50@60
Signal oil..... 50@60
Paraffine..... 18@20

SUNDRIES.

Benzine..... 1 gal., 80c
Turpentine..... 1 gal., 30c
Chalk..... 1 lb, 10c
Chalk, block..... 1 lb, 10c

Dryer patent Am'n..... asst'd cans, 8c; keg, 7c
Frostings..... 40c
Glue, white..... 18@36c
Glue, sheet..... 14@20c
Glue, ordinary..... 8@12c
Glasiers' Points, zinc..... 8c
Gum, Copal..... 36c
Gum, Damar..... 25c

METALS.

TIN PLATES.

BLOCK TIN.

"Lamb and Flag," and "Straits."
Large Pigs..... 93
Small Pigs..... 94
Bars..... 26

TINNERS' SOLDIER.

No. 1 Refined..... 13
Market Half-and-Half..... 14
Strictly Half-and-Half..... 14 1/2

ROOFING PLATES.

IC, 14X20, Cloice Charcoal Terne..... 5 00
IX, 14X20, " " "..... 6 50
IC, 20X28, " " "..... 10 00
IX, 20X28, " " "..... 13 00
IC, 20X28, Extra fine quality, charcoal roof-
ing, genuine "old style" redipped..... 14 00
IX, 20X28, " " "..... 18 00

COKE PLATES.

C, 10X14, bright, "B. V." grade..... 5 00
C, 14X20, " " "..... 5 00
X, 14X20, " " "..... 6 50
C, 10X20, Gutters..... 8 50

In cases of 500 lbs., 1/2 D..... 5 1/2
in smaller quantities, 1/2 D..... 6 1/2

TIN PLATES.

IC, 10X14, Charcoal..... 5 50
IX, 10X14, " " "..... 7 50
IX, 12X12, " " "..... 5 75
IX, 12X12, " " "..... 7 75
IX, 14X20, " " "..... 7 50
IX, 14X20, " " "..... 9 50
IX, 14X20, " " "..... 11 50
IX, 14X20, " " "..... 13 50
IX, 20X28, " " "..... 15 00
IX, 20X28, " " "..... 15 00
DC, 100, Plate " " "..... 5 50
DX, 100, " " "..... 7 50
DXX, 100, " " "..... 9 50
DXXX, 100, " " "..... 11 50

HARBITT METAL.

A 1..... 15
No. 1 Ordinary..... 10
Antimony..... 18
Excelsior Harbitt Metal, No. 2..... 10
" " "..... 9

LEAD.

Pig, (15 oz. bars)..... 3 1/2
Sheet..... 8 1/2
Pipe, full coils..... 7

COPPER.

Tinned Sheathing, 14X15, 14, 16, 18 oz..... 30
" " " Planish'd, 14X18, 14, 16 oz..... 32
" " " " Boilers 7, 8, 9..... 35
Flaming Extra..... 30
Brazil's Copper, 15 to 100 lb..... 20
" " " 10 to 12 lb..... 22
" " " 8 lb..... 24
" " " 6 lb..... 26
Bolt..... 30
Tinning extra..... 40
Copper Pit Bottoms..... 22

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ORIGINAL DOLSON WHITE LEAD.

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LUBRICATING OILS.

QUALITY, HIGH.



WE GUARANTEE QUALITY TO PLEASE. WRITE FOR PRICES. IT WILL PAY YOU.

Literary Notes.

THE August Wide Awake is a splendid number of that magnificent magazine, and its list of contents presents an entrancing array of fresh, interesting, instructive and inspiring reading for young folks. Bright sketches, charming little poems, fascinating stories, cleverly written papers on history, biography, science, art, literature, &c., go to make up this superb issue. In mechanical make-up Wide Awake is one of the handsomest publications in the country, and it is made more attractive this month by a new cover which is unique and beautiful.

WE have received from Wibur J. Kilby, Esq., Suffolk, Va., a copy of a "Sketch Book of Suffolk, Va.; Its People and Its Trade," an attractively gotten up pamphlet, containing a very interesting history of this ancient town with descriptions of its facilities for trade, its attractions as a place of residence, the rapid progress it is now making under the influence of the enterprise and push of its business men, &c. The book is illustrated with engravings of public buildings, the principal business houses, wharves, &c.

TRADE NOTES.

Scientific Oil Cake Crusher.

The Foos Manufacturing Company, of Springfield, Ohio, have on file a large number of testimonials regarding their oil cake crusher and grinder and seed huller, known as the "Scientific." Among the letters received is one from the Refuge Oil Mill Co., of Vicksburg, Miss., in which they state: "We have run the No. 6 mill day and night for the last four weeks, with great satisfaction, and find that it fully comes up to everything you claimed. We have ground 'almost as fine as flour' nine hundred sacks equal to 45 tons during ten hours time. Your machine is an excellent one and will certainly become very popular with grinders of cottonseed cake. If you wish you can refer to us as to merits of your mill. * * * We have so far run about 1,500 tons meal through your mill with first set of plates, and have only reversed them once since mill has been running. The present plates (or plates that came with mill) look as though they will grind another 1,500 tons before necessitating the putting on of new set."

Manager Eakins, of the Collin Co. Oil Works at McKinney, Texas, writes: "We take pleasure in saying that your mill gives perfect satisfaction, and is by far the best cake mill we have ever seen. We have made no special tests as to its capacity, but do not hesitate to say that we think it can be made to grind three tons per hour easily."

This oil cake crusher and grinder, of which so much is said, has a capacity of 2½ to 4 tons of cake per hour, and the crushing and grinding is done in one operation.

THE Wainright Manufacturing Co., 65 and 67 Oliver street, Boston, and 93 Liberty street, New York, manufacturers of feed-water heaters, super-heaters, filters, expansion joints, radiators and corrugated tubing, have been forced by their numerous orders to enlarge their plant, and are erecting an addition to their factory of four stories, 31x78 feet, which will contain machine shop, and corrugating and radiator departments. Their former building has been moved, and will also be utilized as a machine shop.

By this change they will be enabled to increase their product some three or four times and meet the demands of their rapidly growing business.

WE have received from the Watts-Campbell Co., Newark, N. J., a copy of their new catalogue, a very handsome volume, containing illustrated descriptions of their Corliss steam engines.

THE Rose Phosphate Mining & Manufacturing Co., St. Andrews Parish, Berkley county, S. C., have recently completed a new pier, giving them fourteen feet of water at low tide, at their works on Ashley river a short distance above Charleston, and are erecting another dry shed, thus showing a prosperous condition of things even with low prices ruling for phosphate land rock.

AMONG the large manufacturers who have made themselves felt in foreign markets is the Egan Company, of Cincinnati, Ohio, builders of improved wood-working machinery. Their foreign trade has grown to very large proportions, and now constitutes, they say, fully one-eighth of their entire manufacture. Foreign users have, in most cases, been buying English goods, but the improved wood-working machinery as manufactured by the Americans is so far superior that they are willing to pay a little more for it. The Egan Company are perfecting arrangements in foreign countries that will better enable them to place their goods in foreign markets at figures to compete with any manufacturers of this class.

ARCHITECTS and builders, who deem it necessary to keep up with the march of events, should give full consideration to the growing art of sheet metal construction. There is certainly ten times more sheet metal used in building now than ten years ago, and its uses are only fairly initiated, many new ones being devised yearly, prominent among which we mention fire-proof corrugated iron arches for ceilings; tastefully painted small sized corrugations for interior decorations of public halls, theatres, offices and stores, and also for various other uses adapted for particular cases only; these in addition to the well-known and practically tested use of iron for roofing and siding.

A cause that has had a great deal to do with bringing about the rapid increase in these uses of sheet metal has been the ably directed energy of the always advancing and thoroughly reliable Cincinnati Corrugating Co., of Cincinnati, Ohio, whose "literature" we would recommend to the perusal of all interested in building.

THE Detroit Lubricator Company about seven years ago paid George H. Flower, of Chicago, some \$30,000 for his patent lubricating device, and in the manufacture of this patent the company was mainly organized. The device comprises an oil chamber, into which condensed water is admitted through a water-sealed conduit. The oil is forced out into the bottom of a glass water tube, and is caused to rise through the water in visible drops to the top, whence it goes to the parts of the machinery needing lubrication. This is the "sight feed" lubricator so-called, and is in extensive use on railroad locomotives, etc. For two years past F. Lunkenheimer, of Cincinnati, has been making and selling lubricators which differed from the Flower's patent only in having a straight pipe leading from the condenser to the bottom of the oil reservoir. The Detroit company commenced an action in the United States Circuit Court sometime ago against the Cincinnati firm, and to-day the court rendered a decree reciting that Lunkenheimer's device was an infringement, and referring the matter to a master to take an account of profits and damages.—From Detroit Evening News.

Important.

The improvements of the Grand Union Hotel are simply elegant, and the hotel is always kept in perfect order. It is so convenient to all the depots that guests arriving by the Grand Central Depot have their baggage transferred to and from the Grand Union Hotel in five minutes, free of charge. Guests arriving by steamer or railroad, South, North, East or West, are conveyed to the Grand Union Hotel by the elevated railroad

for five to fifteen cents, thereby saving \$3 carriage hire. During the past year 110,000 people occupied the 613 rooms of the Grand Union Hotel at \$1 and upwards per day, including of course its elegant suites of rooms for families on the European plan. The dining-rooms, restaurant, cafe, lunch and wine-rooms were supplied with the best at moderate prices. Families lived better at the Grand Union Hotel, and for less money, than at any other first-class hotel in New York.

THE American House, Boston, holds its popularity as well as any hotel in the country, on account of its central location, excellent management and liberal charges for first-class accommodations.

List of Patents.

The following Patents were granted to citizens of the Southern States, bearing date July 30, 1886. Reported expressly for this paper by Louis Bagger & Co., Mechanical Experts and Solicitors of Patents, Washington, D. C.

Abbett, Henry, Carrollton, Ky. Padlock.....	346,011
Atkins, D. T., Worsham, Va. Millstone-dress	346,015
Austin, N. W., Newport, Ky. Weighing and price scale.....	346,017
Beales, E. D., Guyandotte, W. Va. Combination tool.....	345,826
Campbell, P. E., Dovesville, S. C. Remedy for dropsy.....	345,671
Colquitt, H. H., Atlanta, Ga. Fertilizer.....	346,024
Cook, C. C., Baltimore, Md. Cigar.....	346,025
Fellrath, C. J., Gatesville, Texas. Vibrating churn.....	345,961
Fischer, W. M., Alexandria, Va. Cork-fastener.....	345,963
Gaines, M. N., Dunedin, Fla. Fruit-conveyer.....	345,891
Gilman, E. P., Jacksonville, Fla. Sash-lock and holder.....	345,779
Gorny, Jacob, Houston, Tex. Car-coupling.....	346,039
Griffiths, J. A., Winter Park, Fla. Wire binder for boxes.....	345,895
Harrold, Manlon, Fort Worth, Texas. Air-compressor.....	345,969
Jonas, F. B., New Orleans, La. Swinging gate.....	346,050
Kelly, S. V., Tazewell Court-House, Va. Wagon-box.....	345,975
Lips, G. R., Louisville, Ky. Gig-saddle.....	345,853
McGlofin, H. B., Swan Lake, Miss. Swing-ing crib and bed.....	345,796
Miller, W. J., Colorado, Tex. Wheel-hub.....	345,716
Morein, Jules, Norfolk, Va. Fence-railing or balcony.....	346,057
Murphy, J. A. & M. T., New Orleans, La. Oil-cake mat.....	346,059
Nottingham, Lloyd, Norfolk, Va. Letter-file.....	346,061
O'Brien, J. D., Pembroke, Ky. Exercising machine.....	345,856
Parks, Alex., Jr., Martinsburg, W. Va. Util-izing the waste of breweries, &c.....	345,987
Potts, A. W., Apple Valley, Ga. Mold-board for cultivators.....	346,064
Powell, J. C., Macon, Ga. Hand stamp.....	346,065
Reaves, T. D., Farmington, Ky. Animal-poke.....	345,859
Vaile, C. A., Baltimore, Md. Skylight.....	346,077
Webber, E. B., Collierville, Tenn. Muzzle.....	345,749
Winston, J. R., Hycotee, N. C. Vehicle-wheel.....	346,008

PATENTS FOR INVENTIONS

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Measuring Screw 10, 16 or 20 Threads to the inch, graduated to read thousandths or 32ds without calculation.

IT WILL PAY YOU TO USE THIS MACHINE

Upon COMMON WORK for the TIME it will save. Upon FINE WORK for the ACCURACY it will secure. It is the only Micrometer that will not lose its accuracy by use.

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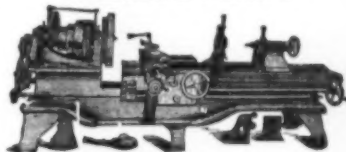
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Blair Manufacturing Co.—Buckthorn Fencing.
Blair Manufacturing Co.—Easy Lawn Mowers.
Boss Molasses Gates.
Buffalo Hammer Co.—Cast Steel Hammers.
C. S. Bell & Co.—Farm Bells.
Carr & Crawley.—Shelf and Saddlery Hardware.
Clark Bros. & Co.—Bolts.
H. Chapin's Sons.—Planes, Rules, Levels, etc.
John Chatillon & Son.—Spring Balances.
R. S. Clark & Co.—Hand and Sleigh Bells.

A. Field & Sons.—Tacks, Finishing and Shoe Nails
Gooch Freezer Co.—Peerless Freezers.
H. C. Hart Manufacturing Co.—Shutter and Spring Hinges, Screen
Frames, &c.
Hubbard & Co.—Axe, Shovels, Hoes and Saws.
Kimball's Patent Solid Steel Shovels and Spades.
Lawson & Brezler.—Keystone Forks.
W. T. Mercereau & Co.—Stair Rods, Dog Collars, &c.
Nicholson File Co.
Peck Bros. & Co.—Brass Cocks.
Patton Manufacturing Co.—Enameled and Finished Stoneware, &c.
Penfield, Block & Co.—Tackle Blocks.

Harvey W. Peace Co.—Hand, Rip and Panel Saws.
H. W. Reed—Brick and Plastering Trowels, Shoe Knives, &c.
Scott Manufacturing Co.—Peach and Apple Parers, Ice Creepers, &c.
Henry Seymour Cutlery Co.—Seymour's and Massachusetts Shears.
B. Seitz.—Root Hames.
Underhill Edge Tool Co.—Hatchets, Adzes, &c.
Walker Horse Shoe Co.—Patent Horse and Mule Shoes.
R. Wallace & Son, Manufacturers.—Plated Ware.
Wheeling Hinge Co.—Wrought Goods.
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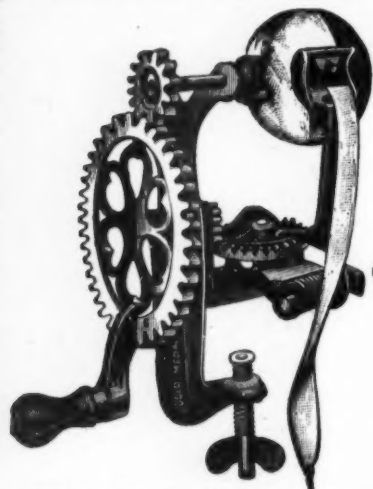
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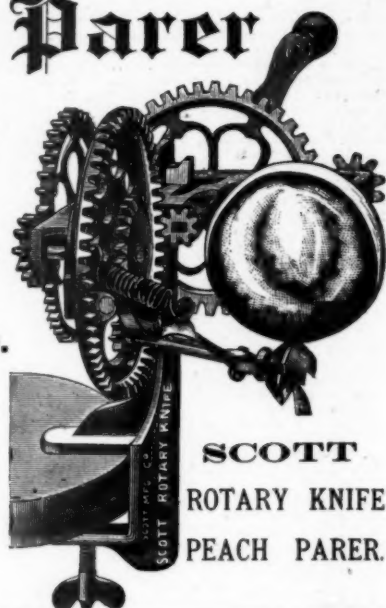
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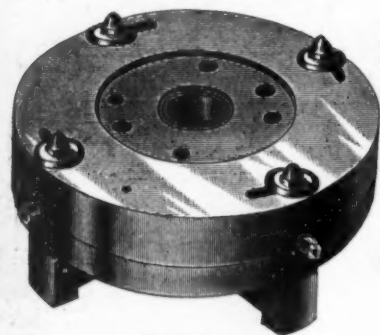
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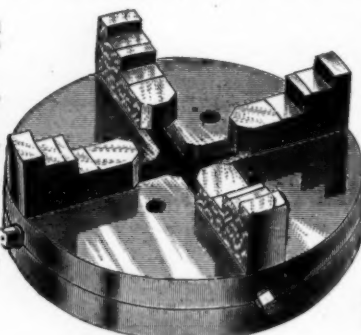
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This Chuck is constructed
upon the same general principles
as the well-known

Horton Chuck

with the additional feature that
it can be used either as an

Independent,
Universal Concentric
or Eccentric.



FRONT VIEW.

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Operated Combina-
tion Chuck in the
market.

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Wright's..... 9%
Armitage's Mouse Hole..... 10%
Trenton..... 10%
Wilkinson's..... 10%

AUGERS AND BITS.
Conn. Valley Mfg. Co..... extra, 60¢ to 1%
Douglas Mfg. Co..... No. 1, 60¢ to 1%
Cook's Douglas Mfg. Co..... dis 60¢ to 1%
Grissold..... dis 50¢ to 1%
Patent Solid Head..... dis 25%
Russell Jennings' Auger, Dowell, Machine-
Dowell and Hand Rail Bits..... dis 10¢ to 10%
Ives' "Jennings" Bits..... dis 40¢ to 10%
Expansive Bits, Clark's small, 18; large, 26..... dis 25%
Expansive Bits, Ives'..... dis 30% to 33%
Expansive Bits, Blake's..... dis 40%
Hollow Augers, Ives'..... dis 25%
Hollow Augers, Douglas's..... dis 25% to 30%
Hol. Aug., Bonney's Adjust., 1/2 doz 1/2, dis 25%
Hol. Aug., Stearns' Adjust., 1/2 doz 1/2, dis 20%
Hol. Aug., Ives' Expansive, each 1/4, dis 30% to 35%
Hol. Aug., Universal Expansive, each 1/4, dis 30%
Wood's..... dis 25%
Gimlet Bits..... 1/2 doz 1/2, dis 40%
Gimlet Bits, Diamond..... 1/2 doz 1/2, dis 40%
Double Cut Gimlet Bits, Shephardson's..... dis 40%
Double Cut Gimlet Bits, Douglas's..... dis 40%
Double Cut Gimlet Bits, Ives'..... dis 50%
Horse's Bit Stock Drill..... dis 40% to 1%
L'Homme's Ship Augers..... dis 15%

AWL HATS.
Sewing Brass Ferrule..... 1/2 doz 1/2, dis 40% to 1%
Patent Sewing, Short..... 1/2 doz 1/2, dis 40% to 1%
Patent Sewing, Long..... 1/2 doz 1/2, dis 40% to 1%
Patent Peg, Plain Top..... 1/2 doz 1/2, dis 40% to 1%
Patent Peg, Leather Top..... 1/2 doz 1/2, dis 40% to 1%

AWLS, BRAD SETS, &c.
Awls, Sewing, Common..... 75c. to 1%
Awls, Shouldered Peg..... 75c. to 1%
Awls, Patent Peg..... 75c. to 1%
Awls, Shouldered Brad, 1/2 doz 1/2, dis 25% to 30%
Awls, Handled Brad, 1/2 doz 1/2, dis 25% to 30%
Brad Sets, Aiken's..... 1/2 doz 1/2, dis 40% to 1%
Brad Sets, No. 42, 1/2 doz 1/2, dis 40% to 1%
Brad Sets, Stanley's Exc., No. 1, 1/2 doz 1/2, dis 30% to 35%
Brad Sets, Stanley's Exc., No. 2, 1/2 doz 1/2, dis 30% to 35%
Brad Sets, Stanley's Exc., No. 3, 1/2 doz 1/2, dis 30% to 35%

AXES.
Collins & Co..... 1/2 doz 1/2, beveled, 75c. to 1%
Cohoes Mfg. Co..... 1/2 doz 1/2, beveled, 75c. to 1%
Lippincott or Mann's.....
Single Bit, 1/2 to 3/4 and under..... 1/2 doz 1/2, dis 50% to 1%
Single Bit, 1/2 to 3/4 and over..... 1/2 doz 1/2, dis 50% to 1%
Double Bit, 1/2 to 3/4 and under..... 1/2 doz 1/2, dis 50% to 1%
Double Bit, 1/2 to 3/4 and over..... 1/2 doz 1/2, dis 50% to 1%
Double Bit, beveled..... 1/2 doz 1/2, dis 50% to 1%
Second quality Axes..... 50 cts. less than above

AXLES.
Sheldon & Co., iron..... 55% off
" " steel..... 55% off
AXLE GRASS—Fraser's..... 1/2 lb. 6c.
BALANCES.....
Spring Balances..... dis 40% to 1%

BELLS.
Hand, Light Brass..... dis 75% to 1%
Hand, White Metal..... dis 60% to 1%
Hand, Silver Chime..... dis 25% to 30%
Hand, Globe (Coke's Patent)..... dis 25% to 30%
Gong, Abbe's..... dis 20% to 25%
Gong, Yankee..... dis 20% to 25%
Gong, Barton's..... dis 20% to 25%
Leon Reading..... dis 25% to 30%
Pull, Brook's..... dis 50% to 1%
Crank, Taylor's..... dis 25% to 30%
Lever, Sargent's..... dis 55% to 1%
Bloomfield..... dis 20%
Lever, R. & E. M. Co's..... dis 45% to 1%
Call..... dis 25%
Cow, Common Wrought..... dis 55% to 1%
Cow, Western, Sargent's List..... dis 55% to 1%
Cow, Kentucky, Sargent's List..... dis 55% to 1%
Cow, Moore's or Dodge's, Genuine Ky., new list:
Nos. 1 1/2 3 5 6 Hog 1/2 dis. 70
1/2 1 1/2 3 5 6 Hog 1/2 dis. 70
1/2 1 1/2 3 5 6 Hog 1/2 dis. 70
Cow, Texas "Star"..... dis 40%

BELLOWS.
Blacksmith's Common..... dis 50% to 1%
Molder's..... dis 25%
Hand Bellows..... dis 25%

BLIND FASTENERS.
Francis..... dis 20%
Mackrell's..... 1/2 doz pairs 1/2, dis 10%
Van Sand's Screw Pattern..... 1/2 doz 1/2, dis 10%
Van Sand's Old Pattern..... 1/2 doz 1/2, dis 10%
Merriman's..... 1/2 doz 1/2, dis 10%
Zimmerman's, 10 1/2 in..... 1/2 doz 1/2, dis 10%
Zimmerman's, 9 in..... 1/2 doz 1/2, dis 10%

BLIND STAPLES.
Barbed, 1/2 in. and larger..... 1/2 doz 1/2, dis 11c net
Barbed, 1/2 in..... 1/2 doz 1/2, dis 13c net

BLOCKS.
Bagnall & Loud..... dis 50%

BOLTS.
Cast Iron Barrel Shutter, &c..... dis 55% to 1%
Cast Iron Chain (Sargent's list)..... dis 60% to 1%
Wrought Barrel..... dis 55% to 1%
Wrought Square..... dis 55% to 1%
Wrt. Shutter, all Iron, Stanley's list..... dis 50% to 1%
Wrt. Shutter, Brass Knob, Stanley's list..... dis 50% to 1%
Wrought Shutter, Sargent's list..... dis 55% to 1%
Wrought Sunk Flush, Sargent's..... dis 65% to 1%
Wrought Sunk Flush, Stanley's..... dis 40% to 1%
Wrought B. K. Flush, Stanley's..... dis 50% to 1%
Carriage and Tire, Common, new list..... dis 80%
Carriage and Tire, Philadelphia Pattern..... dis 80%
Carriage Bolts, Clarke's..... dis 75% to 1%
Norway..... dis 75% to 1%
R. B. & W. Carriage (old list)..... dis 65%
Tire, American Screw Co's., Phila..... dis 8 1/2%
Tire, "Bay State"..... dis 70% new list
Eagle Philadelphia Tire Bolt..... dis 8 1/2%
Stove..... dis 70%
Flow..... dis 60% to 1%
Machine..... dis 75% to 1%
Bolt Ends and Lag Screws..... dis 75% to 1%

BORAX.
1 1/2 lb. net.....
BRACES.....
Q. S. Backus..... dis 50%
Barber's..... dis 40%
Spofford's Patent..... dis 50%
Ives' Patent Braces..... dis 50%
Common Ball (American)..... dis 55%
Amidon's..... dis 50%

BORING MACHINES—WITHOUT AUGERS.
Sweet & Clark upright, 3.60 angular..... 4.40 net
Lawrence..... 3.00 net
Hubbard..... 3.00 net
Phillips, with Augers..... 7.00 net

BRACKETS.
Shelf, plain..... dis 50% to 1%
Shelf, Fancy..... dis 55% to 1%

BRIGHT WIRE GOODS.
New list..... dis 70¢ to 10¢ to 1%
BULL RINGS.
Union Nut Co..... dis 55%
Sargent's..... dis 60% to 1%
Humason, Beckley & Co's..... dis 60% to 1%

BUTTS.
Wrought Brass..... dis 70%
Cast Brass, Fast Joint..... dis 50% to 1%
Cast Brass, Loose Joint..... dis 10% to 1%
Fast Joint, Narrow..... dis 60% to 1%
Fast Joint, Broad..... dis 60% to 1%
Loose Joint..... dis 70% to 1%
Loose Joint, Japanned..... dis 70% to 1%
Loose Joint, Jap, with Acorns..... dis 70% to 1%
Parliament Butts..... dis 70% to 1%
Mayer's Hinges..... dis 70% to 1%
Loose Pin, no Acorn..... dis 70% to 1%
Loose Pin, Acorn..... dis 70% to 1%
Loose Pin, Acorns, Japanned..... dis 70% to 1%
Loose Pin, Acorns, Jap'd, Plated..... dis 70% to 1%

Wrought Iron.
Fast Joint, Narrow..... dis 65%
Fast Joint, Lt. Narrow..... dis 65%
Fast Joint, Broad..... dis 65%
Loose Joint, Broad..... dis 65%
Table Butts, Back Flaps, &c..... dis 65%
Inside Blind, Regular..... dis 65%
Inside Blind, Light..... dis 65%
Loose Pin, Wrt..... dis 65%
Loose Pin, Light..... dis 65%

Spring Hinges.
Geer's Spring and Blank Butts..... dis 30%
Hart Manufacturing Co..... dis 60% to 1%
American Spring Hinge Co's..... dis 25%
Gem Spring Hinges..... dis 25%
Blind Butts, Shepard's, Nos. 50 and 60..... dis 70%
Blind Butts, Shepard's, No. 50..... dis 70% to 1%
Blind Butts, Shepard's, No. 75..... dis 80%
Blind Butts, Lull & Porter..... dis 80%
Blind Butts, Huffer..... dis 80%
Blind Butts, Clark's, Nos. 1, 3, 5..... dis 80%
Standard Lull & Porter..... dis 75% to 1%

BOW PINS.
Humason, Beckley & Co's..... dis 55% to 1%
Sargent & Co's..... 1/2 doz 1/2, dis 55% to 1%
Hotchkiss..... dis 25%

BUTCHER'S CLEAVERS.
Humason & Beckley Mfg. Co..... dis 25%
Bradley's..... dis 25%
Beatty's..... dis 25% to 30%

CAN OPENERS.
American..... 1/2 doz 1/2, dis 10%
New Idea..... 1/2 doz 1/2, dis 15% to 20%
No. 4, French..... 1/2 doz 1/2, dis 55%
No. 5, Iron Handle..... 1/2 doz 1/2, dis 55%
Sardine Scissors..... 1/2 doz 1/2, dis 55%
Sprague, No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

CAN OPENERS.
American..... 1/2 doz 1/2, dis 10%
New Idea..... 1/2 doz 1/2, dis 15% to 20%
No. 4, French..... 1/2 doz 1/2, dis 55%
No. 5, Iron Handle..... 1/2 doz 1/2, dis 55%
Sardine Scissors..... 1/2 doz 1/2, dis 55%
Sprague, No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547

COOPERS TOOLS.	
Bradley's.....	dis 19.50
Barton's.....	dis 20.50
CROW BARS.	
Cast Steel.....	dis 10.40
Iron, Steel Points.....	dis 3.50
CURLING IRONS, &c.	
1/2, 3/4, 1 in., 1.50, 2.00, 2.50.....	dis 10.50
Curling Tongs.....	doz \$3.65, dis 10
Pinching Irons.....	doz \$7.50, dis 20
CURRY COMBS.	
Fitch's new list.....	dis 50
Hotchkiss, Novelty, new list, July, 1880.....	dis 25
Hotchkiss, Excelsior Superior Champion.....	dis 25
Lawrence, "Perfect".....	dis 25
Rubber.....	doz \$10.00, dis 25
Sweet & Clarke.....	dis 25
Lusters.....	dis 25
CURTAIN PINS.	
Silvered Glass.....	net
White Enamel.....	net
CUTLERY.	
Association (Table).....	net
Naugatuck Cutlery Co.....	list net
Excelsior Knife Co.....	net
Wilson's Butcher and Shoe Knives.....	dis 30
Ames' Shoe Knives.....	dis 15
Wm. Rogers Mfg. Co., Plated Cutlery.....	Net
DOG COLLARS.	
Embossed Gilt.....	dis 20
Leather.....	dis 25
Brass.....	dis 25
DOOR SPRINGS.	
Torrey's Rod, regular size, 1/2 doz., 3/4 doz., 1 doz.....	dis 40
Gem (Coil):	
No. 1, Large Japanned.....	doz \$4.00
No. 2, Medium Japanned.....	doz 2.75
No. 3, Small Japanned.....	doz 2.00
No. 4, ("Shoo Fly") Screen door size, 1.50	
No. 5, Screen door size.....	2.00
No. 6, Medium.....	2.75
No. 7, Large.....	4.00
Standard—10 doz \$1.25; 9 doz \$1.75.....	dis 60
8 doz 2.50; 6 doz \$3.50.....	dis 60
Hercules.....	dis 50
DRAWING KNIVES	
Ohio Tool Co.....	dis 60
Crossman's No. 1.....	dis 65
Nobles Mfg. Co.....	dis 15
Bradley's.....	dis 35
Adjustable Handle.....	dis 20
P. S. & W.....	dis 70
Douglass.....	dis 75
DRILLS AND DRILL STOCKS.	
Blacksmiths'.....	each, \$2.50, dis 10
Blacksmiths' Self-Feeding.....	each, 7.50, dis 20
Breast, P. S. & W.....	dis 20
Breast, Wilson's.....	dis 20
Breast, Millers Falls.....	each, \$3.00, dis 25
Breast, Bartholomew's.....	each, \$2.50, dis 25
Wilson's Drill Stocks.....	dis 10
Automatic Boring Tools.....	each, \$2.25, dis 20
EGG BEATERS.	
Dover.....	doz \$2.50, dis 2
Medallion.....	gross, \$10.00
Victoria.....	gross, \$10.00
EMERY AND EMERY PAPER.	
Regular numbers.....	dis 60
Flour and F. F.....	dis 40
B. & A. Emery Paper.....	dis 30
ENAMELED AND TINNED WARE.	
Kettles.....	dis 60
Sauce Pans.....	dis 45
Tinned Sauce Pans.....	dis 45
Escutcheon Pins—Brass.....	dis 50
ESCUTCHEONS.	
Door Lock.....	Same discounts as Door Locks
Brass Thread.....	dis 25
Wood.....	dis 25
FAUCETS.	
Fenn's.....	dis 40
Fenn's Cork Stops.....	dis 33
Star.....	dis 55
Fraser's Patent Petroleum.....	dis 20
Vest's Patent Key.....	dis 45
Anchor Lock.....	dis 45
Metallic Key, Leather Lined.....	dis 60
Cork Lined.....	dis 70
J. Sommer's Best Metallic Key.....	dis 40
J. Sommer's Cork Lined, 1st quality.....	dis 50
FILES.	
E. M. Boynton's.....	new list, dis 25
Western File Co.....	dis 45
Butcher's.....	dis 45
Moss & Gamble.....	\$4.50 to 6
H. Disston & Sons (new list).....	dis 40
Heller Bros.' Horse Rasps.....	dis 30
Nicholson.....	dis 55
New American.....	dis 50
Union File Co.....	dis 45
Stubs, new list.....	\$7.50 to 1.25 off
FLUTING MACHINES.	
Knox, 1/4-inch Rolls.....	\$3.50 each } dis 35
Knox, 6-inch Rolls.....	\$4.00 each }
Knox, 8-inch.....	\$6.50
Eagle, 1/4-inch Roll.....	\$2.15, dis 35
Eagle, 3/4-inch Roll.....	2.85, dis 35
Crown, 1/4-in., 3/4-in., 1 in., 1.50, 2.00, 2.50.....	\$6.50 each.....
Crown Jewell.....	6-in., \$3.40 each.....
American, 5-in., 6-in., 7-in., 8-in., 9-in., 10-in., 11-in., 12-in., 13-in., 14-in., 15-in., 16-in., 17-in., 18-in., 19-in., 20-in., 21-in., 22-in., 23-in., 24-in., 25-in., 26-in., 27-in., 28-in., 29-in., 30-in., 31-in., 32-in., 33-in., 34-in., 35-in., 36-in., 37-in., 38-in., 39-in., 40-in., 41-in., 42-in., 43-in., 44-in., 45-in., 46-in., 47-in., 48-in., 49-in., 50-in., 51-in., 52-in., 53-in., 54-in., 55-in., 56-in., 57-in., 58-in., 59-in., 60-in., 61-in., 62-in., 63-in., 64-in., 65-in., 66-in., 67-in., 68-in., 69-in., 70-in., 71-in., 72-in., 73-in., 74-in., 75-in., 76-in., 77-in., 78-in., 79-in., 80-in., 81-in., 82-in., 83-in., 84-in., 85-in., 86-in., 87-in., 88-in., 89-in., 90-in., 91-in., 92-in., 93-in., 94-in., 95-in., 96-in., 97-in., 98-in., 99-in., 100-in., 101-in., 102-in., 103-in., 104-in., 105-in., 106-in., 107-in., 108-in., 109-in., 110-in., 111-in., 112-in., 113-in., 114-in., 115-in., 116-in., 117-in., 118-in., 119-in., 120-in., 121-in., 122-in., 123-in., 124-in., 125-in., 126-in., 127-in., 128-in., 129-in., 130-in., 131-in., 132-in., 133-in., 134-in., 135-in., 136-in., 137-in., 138-in., 139-in., 140-in., 141-in., 142-in., 143-in., 144-in., 145-in., 146-in., 147-in., 148-in., 149-in., 150-in., 151-in., 152-in., 153-in., 154-in., 155-in., 156-in., 157-in., 158-in., 159-in., 160-in., 161-in., 162-in., 163-in., 164-in., 165-in., 166-in., 167-in., 168-in., 169-in., 170-in., 171-in., 172-in., 173-in., 174-in., 175-in., 176-in., 177-in., 178-in., 179-in., 180-in., 181-in., 182-in., 183-in., 184-in., 185-in., 186-in., 187-in., 188-in., 189-in., 190-in., 191-in., 192-in., 193-in., 194-in., 195-in., 196-in., 197-in., 198-in., 199-in., 200-in., 201-in., 202-in., 203-in., 204-in., 205-in., 206-in., 207-in., 208-in., 209-in., 210-in., 211-in., 212-in., 213-in., 214-in., 215-in., 216-in., 217-in., 218-in., 219-in., 220-in., 221-in., 222-in., 223-in., 224-in., 225-in., 226-in., 227-in., 228-in., 229-in., 230-in., 231-in., 232-in., 233-in., 234-in., 235-in., 236-in., 237-in., 238-in., 239-in., 240-in., 241-in., 242-in., 243-in., 244-in., 245-in., 246-in., 247-in., 248-in., 249-in., 250-in., 251-in., 252-in., 253-in., 254-in., 255-in., 256-in., 257-in., 258-in., 259-in., 260-in., 261-in., 262-in., 263-in., 264-in., 265-in., 266-in., 267-in., 268-in., 269-in., 270-in., 271-in., 272-in., 273-in., 274-in., 275-in., 276-in., 277-in., 278-in., 279-in., 280-in., 281-in., 282-in., 283-in., 284-in., 285-in., 286-in., 287-in., 288-in., 289-in., 290-in., 291-in., 292-in., 293-in., 294-in., 295-in., 296-in., 297-in., 298-in., 299-in., 300-in., 301-in., 302-in., 303-in., 304-in., 305-in., 306-in., 307-in., 308-in., 309-in., 310-in., 311-in., 312-in., 313-in., 314-in., 315-in., 316-in., 317-in., 318-in., 319-in., 320-in., 321-in., 322-in., 323-in., 324-in., 325-in., 326-in., 327-in., 328-in., 329-in., 330-in., 331-in., 332-in., 333-in., 334-in., 335-in., 336-in., 337-in., 338-in., 339-in., 340-in., 341-in., 342-in., 343-in., 344-in., 345-in., 346-in., 347-in., 348-in., 349-in., 350-in., 351-in., 352-in., 353-in., 354-in., 355-in., 356-in., 357-in., 358-in., 359-in., 360-in., 361-in., 362-in., 363-in., 364-in., 365-in., 366-in., 367-in., 368-in., 369-in., 370-in., 371-in., 372-in., 373-in., 374-in., 375-in., 376-in., 377-in., 378-in., 379-in., 380-in., 381-in., 382-in., 383-in., 384-in., 385-in., 386-in., 387-in., 388-in., 389-in., 390-in., 391-in., 392-in., 393-in., 394-in., 395-in., 396-in., 397-in., 398-in., 399-in., 400-in., 401-in., 402-in., 403-in., 404-in., 405-in., 406-in., 407-in., 408-in., 409-in., 410-in., 411-in., 412-in., 413-in., 414-in., 415-in., 416-in., 417-in., 418-in., 419-in., 420-in., 421-in., 422-in., 423-in., 424-in., 425-in., 426-in., 427-in., 428-in., 429-in., 430-in., 431-in., 432-in., 433-in., 434-in., 435-in., 436-in., 437-in., 438-in., 439-in., 440-in., 441-in., 442-in., 443-in., 444-in., 445-in., 446-in., 447-in., 448-in., 449-in., 450-in., 451-in., 452-in., 453-in., 454-in., 455-in., 456-in., 457-in., 458-in., 459-in., 460-in., 461-in., 462-in., 463-in., 464-in., 465-in., 466-in., 467-in., 468-in., 469-in., 470-in., 471-in., 472-in., 473-in., 474-in., 475-in., 476-in., 477-in., 478-in., 479-in., 480-in., 481-in., 482-in., 483-in., 484-in., 485-in., 486-in., 487-in., 488-in., 489-in., 490-in., 491-in., 492-in., 493-in., 494-in., 495-in., 496-in., 497-in., 498-in., 499-in., 500-in., 501-in., 502-in., 503-in., 504-in., 505-in., 506-in., 507-in., 508-in., 509-in., 510-in., 511-in., 512-in., 513-in., 514-in., 515-in., 516-in., 517-in., 518-in., 519-in., 520-in., 521-in., 522-in., 523-in., 524-in., 525-in., 526-in., 527-in., 528-in., 529-in., 530-in., 531-in., 532-in., 533-in., 534-in., 535-in., 536-in., 537-in., 538-in., 539-in., 540-in., 541-in., 542-in., 543-in., 544-in., 545-in., 546-in., 547-in., 548-in., 549-in., 550-in., 551-in., 552-in., 553-in., 554-in., 555-in., 556-in., 557-in., 558-in., 559-in., 560-in., 561-in., 562-in., 563-in., 564-in., 565-in., 566-in., 567-in., 568-in., 569-in., 570-in., 571-in., 572-in., 573-in., 574-in., 575-in., 576-in., 577-in., 578-in., 579-in., 580-in., 581-in., 582-in., 583-in., 584-in., 585-in., 586-in., 587-in., 588-in., 589-in., 590-in., 591-in., 592-in., 593-in., 594-in., 595-in., 596-in., 597-in., 598-in., 599-in., 600-in., 601-in., 602-in., 603-in., 604-in., 605-in., 606-in., 607-in., 608-in., 609-in., 610-in., 611-in., 612-in., 613-in., 614-in., 615-in., 616-in., 617-in., 618-in., 619-in., 620-in., 621-in., 622-in., 623-in., 624-in., 625-in., 626-in., 627-in., 628-in., 629-in., 630-in., 631-in., 632-in., 633-in., 634-in., 635-in., 636-in., 637-in., 638-in., 639-in., 640-in., 641-in., 642-in., 643-in., 644-in., 645-in., 646-in., 647-in., 648-in., 649-in., 650-in., 651-in., 652-in., 653-in., 654-in., 655-in., 656-in., 657-in., 658-in., 659-in., 660-in., 661-in., 662-in., 663-in., 664-in., 665-in., 666-in., 667-in., 668-in., 669-in., 670-in., 671-in., 672-in., 673-in., 674-in., 675-in., 676-in., 677-in., 678-in., 679-in., 680-in., 681-in., 682-in., 683-in., 684-in., 685-in., 686-in., 687-in., 688-in., 689-in., 690-in., 691-in., 692-in., 693-in., 694-in., 695-in., 696-in., 697-in., 698-in., 699-in., 700-in., 701-in., 702-in., 703-in., 704-in., 705-in., 706-in., 707-in., 708-in., 709-in., 710-in., 711-in., 712-in., 713-in., 714-in., 715-in., 716-in., 717-in., 718-in., 719-in., 720-in., 721-in., 722-in., 723-in., 724-in., 725-in., 726-in., 727-in., 728-in., 729-in., 730-in., 731-in., 732-in., 733-in., 734-in., 735-in., 736-in., 737-in., 738-in., 739-in., 740-in., 741-in., 742-in., 743-in., 744-in., 745-in., 746-in., 747-in., 748-in., 749-in., 750-in., 751-in., 752-in., 753-in., 754-in., 755-in., 756-in., 757-in., 758-in., 759-in., 760-in., 761-in., 762-in., 763-in., 764-in., 765-in., 766-in., 767-in., 768-in., 769-in., 770-in., 771-in., 772-in., 773-in., 774-in., 775-in., 776-in., 777-in., 778-in., 779-in., 780-in., 781-in., 782-in., 783-in., 784-in., 785-in., 786-in., 787-in., 788-in., 789-in., 790-in., 791-in., 792-in., 793-in., 794-in., 795-in., 796-in., 797-in., 798-in., 799-in., 800-in., 801-in., 802-in., 803-in., 804-in., 805-in., 806-in., 807-in., 808-in., 809-in., 810-in., 811-in., 812-in., 813-in., 814-in., 815-in., 816-in., 817-in., 818-in., 819-in., 820-in., 821-in., 822-in., 823-in., 824-in., 825-in., 826-in., 827-in., 828-in., 829-in., 830-in., 831-in., 832-in., 833-in., 834-in., 835-in., 836-in., 837-in., 838-in., 839-in., 840-in., 841-in., 842-in., 843-in., 844-in., 845-in., 846-in., 847-in., 848-in., 849-in., 850-in., 851-in., 852-in., 853-in., 854-in., 855-in., 856-in., 857-in., 858-in., 859-in., 860-in., 861-in., 862-in., 863-in., 864-in., 865-in., 866-in., 867-in., 868-in., 869-in., 870-in., 871-in., 872-in., 873-in., 874-in., 875-in., 876-in., 877-in., 878-in., 879-in., 880-in., 881-in., 882-in., 883-in., 884-in., 885-in., 886-in., 887-in., 888-in., 889-in., 890-in., 891-in., 892-in., 893-in., 894-in., 895-in., 896-in., 897-in., 898-in., 899-in., 900-in., 901-in., 902-in., 903-in., 904-in., 905-in., 906-in., 907-in., 908-in., 909-in., 910-in., 911-in., 912-in., 913-in., 914-in., 915-in., 916-in., 917-in., 918-in., 919-in., 920-in., 921-in., 922-in., 923-in., 924-in., 925-in., 926-in., 927-in., 928-in., 929-in., 930-in., 931-in., 932-in., 933-in., 934-in., 935-in., 936-in., 937-in., 938-in., 939-in., 940-in., 941-in., 942-in., 943-in., 944-in., 945-in., 946-in., 947-in., 948-in., 949-in., 950-in., 951-in., 952-in., 953-in., 954-in., 955-in., 956-in., 957-in., 958-in., 959-in., 960-in., 961-in., 962-in., 963-in., 964-in., 965-in., 966-in., 967-in., 968-in., 969-in., 970-in., 971-in., 972-in., 973-in., 974-in., 975-in., 976-in., 977-in., 978-in., 979-in., 980-in., 981-in., 982-in., 983-in., 984-in., 985-in., 986-in., 987-in., 988-in., 989-in., 990-in., 991-in., 992-in., 993-in., 994-in., 995-in., 996-in., 997-in., 998-in., 999-in., 1000-in.	

Warner & Noble's.....	dis 5.50
Kip's or Selsor's.....	dis 30.50
Yerkes & Plumb.....	dis 15.50
HANDLES.—Door or Thumb Latches.	
No.	0 1 2 3 4
Per doz. \$o.80 1.00 1.18 1.35 1.50.....	dis 55&10 5
Roggins' Latches.....	per doz 35c. & 40c. net
Bronze Iron Door Latches.....	per doz \$o.90&1.10
Jap'd Store Door Handles—Nuts, \$1.25; Plate, —;	
no Plate, \$1.10.....	dis 10 10
Barn Door.....	per doz \$1.60, dis 10 5
Wrought Chest.....	dis 65&10 5
Surface Chest.....	dis 55&10 5
Flush Chest.....	dis 55&10 5
Lifting.....	dis 50&10 5
Saw and Plane.....	dis 40&10 5
Lippincott Cross-Cut Saw.....	per pair 50 5
Hammer and Hatchet.....	per doz 50 5
Brad Awl.....	per gross, \$3.00, dis 20&10 5
Chisel, all kinds.....	dis 50&10 5
Auger, assorted, per gross.....	\$4-5c
Auger, large, per gross.....	5.0c
Patent Auger, Ives'.....	dis 25 5
Patent Auger, Douglass'.....	per set \$1.25 net
Patent Auger, Swan's.....	per set 1.00 net
HAMMOCK CHAIRS.	
White Mountain, per doz.....	\$36.
“ “ Finished in red, per doz.....	\$42.
HANGERS.	
Cronk Hanger Co.—	
No. 4, per doz. pair.....	\$12.00, 50&10 5
“ 5, “ “.....	14.40, 50&10 5
“ 6, “ “.....	18.00, 50&10 5
Iron clad track.....	8 cents per foot, 50&10 5
Barn door stays.....	\$3.00 per doz., 50&10 5
Barn Door, old patterns.....	dis 60&10 5
Barn Door, New England.....	dis 60&10 5
Climax (Anti-Friction).....	dis 50 5
Warner's.....	dis 20 5
Richard's.....	dis 20 5
HATCHETS.	
Underhill's.....	35 5
Haines' Solid Steel.....	30 5
Shingling, Nos. 1 & 2.....	per doz \$7.25 \$8.00 \$8.75
Claw, Nos. 1 & 2.....	per doz 7.75 8.50 9.25
Lathing, Nos. 1 & 2.....	per doz 7.50 8.00 8.50
Hammer's new list.....	dis 45 5
Blood's.....	dis 35 5
Hunt's.....	dis 40 5
Russell's, low list.....	dis 40 5
Cohoes Bench Broad Adzes.....	dis 40 5
HAY KNIVES.	
Gem.....	per doz \$13.50
"Lightning".....	per doz \$20.00 net 5
Wadsworth's.....	dis 30 5
HINGES.	
Plate Hinges \$8, 10&12 in.....	5-6c. per lb.
"Providence" over 12.....	4-6c. per lb.
Screw Hook \$8, 10, 12 in.....	3-4c. per lb.
And Strap.....	2-3c. per lb.
Crown spring Hinges, for screen doors, dis 60 5; for solid doors, single action, dis 45 5; for solid doors, double action, dis 55 5.	
Crown Screen Door Latch.....	per gross \$12, dis 55 5
Crown Christmas-Tree Holders, 2-inch, per doz 3; 3-inch, \$12.....	dis 45 5
Dickford's Portable Pump.....	each \$6, dis 20 5
American Cake Mixer, No. 6.....	each \$3.50, dis 20 5
American Tobacco Cutter.....	per doz \$1.50, dis 30 5
A. M. Co. Clothes Wringer, No. 2 rolls, 10&12 1/2, \$4.80.....	dis 20 5
12&17 1/2, \$4.18.....	dis 20 5
Heavy Welded Hook.....	8 @ 12 in. \$7.50 per 100 lb.; dis 14 in. & up, \$6 per 100 lb.; dis 1 1/2 & 1 in..... 9c. per doz 1 1/2 in..... 9c. per doz 1 1/2 in..... 10c. per doz 1 1/2 in..... 12c. per doz
Screw Hook and Eye.....	dis 20 5
Wrought Strap & T list, Dec. 20, '77.....	dis 65 5
HOOKS.	
Planters.....	60&10&5 5
Riveted Shank.....	per doz \$5.00, dis 60&10&5 5
Socket.....	dis 50 5
Hub.....	dis 60&10 5
Dick's Pat. Solid C. S. Planters.....	dis 60&10 5
Dick's Pat. Solid C. S. Scovill Pattern.....	dis 60&5 5
Lubbard, Bakewell & Co.....	dis 60 5
HORSE NAILS.	
Plain, Nos. 5 6 7 8 9 10.....	dis 20&10 5
Usable, No. 5.....	30c 27c 25c 24c 23c 22c. dis 20&10 5
Finish'd per lb.....	31c 28c 26c 25c 24c 23c. dis 20&10 5
Lin'n'd, P'n, ".....	23c 21c 20c 19c 18c. dis 20&10 5
Lin'n'd, Fin'd ".....	24c 22c 21c 20c 19c. dis 20&10 5
Ass't, ".....	31c 28c 26c 25c 24c 23c. dis 20 5
utnam ".....	27c 24c 22c 21c 20c 19c. dis 50&10 5
aranac ".....	26c 23c 21c 20c 19c 18c. dis 20 5
low ".....	26c 23c 21c 20c 19c 18c. dis 10&5 5
thbe ".....	28c 25c 23c 22c 21c 20c. dis 10&10 5
hampain.....	
Forged per lb.....	31c 28c 26c 25c 24c 23c. dis 30&10 5
C, ".....	28 25 23 22 21 21. dis 10&5 5
K.....	28 25 23c 22c 21c 21c. dis 18&5 5
ridgewater.....	28c 25c 23c 22c 21c 20c. dis 30 5
ew Haven.....	31c 28c 26c 25c 24c 23c. dis 30&10 5
apewell.....	31c 26c 26c 25c 24c 23c. dis 20&10 5
HORSE SHOES.	
Curden.....	per keg \$3.85
Light Horse Shoe Co. Perkin's Improved.....	per keg \$3.85
Light, Medium and Heavy.....	per keg \$3.75 5
ule Shoes.....	per keg \$4.87 5
alker's—Forged: (Light, Medium and Heavy).....	per keg \$3.75 5
Horse.....	per keg \$4.75 5
Mule.....	per keg \$4.75 5
ryden Forg'd Heel & Toe Horse Shoes, \$4.75/kg.....	
“ “ Plain “ “.....	\$4.75 “ “
“ “ Frog “ “.....	\$5.00 “ “
“ “ Pressure “ “.....	\$5.00 “ “
“ “ Heel & Toe Mule “ “.....	\$5.75 “ “
ryden Steel Mule Shoes, \$6.75 per keg.....	dis 5 5
iamond State Horse Shoes.....	\$3.85 per keg
iamond State Mule Shoes.....	\$4.85 per keg
enix Light, Medium and Heavy Horse Shoes.....	\$3.87 5 per keg
enix Mule Shoes.....	\$4.87 5 per keg
x Shoes—Mt. Carmel Ox Shoes.....	10 cts. per lb.
ICE CREAM FREEZERS.	
Perless—3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7.80; 8 quart, \$9; 10 quart, \$12. The Gooch Patent "Giant"—14 quart, \$20; 18 quart, \$25; 21 quart, \$30; 25 quart, \$35; 32 quart, \$40; 42 quart, \$45. Discount 50&10 5.	
American—3 quart, \$6.75; 3 quart, \$3.95; 4 quart, \$3.75; 4 quart, \$5 each.....	dis 45 5
own, single action, 4 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$9; 10 quart, \$11; 14 quart, \$14.....	dis 45 5
own, double action, with crank, 8 quart, \$10.50; 10 quart, \$13; 14 quart, \$16.50; 18 quart, \$21; 24 quart, \$25. With fly wheel, 8 quart, \$13; 10 quart, \$16; 14 quart, \$20; 18 quart, \$25; 24 quart, \$30; 32 quart, \$37.50.....	dis 45 5
own, double action, 2 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$9; 10 quart, \$11; 14 quart, \$14.....	dis 45 5
own, double action, 2 quart, \$3.75; 3 quart, \$4.50; 4 quart, \$5.50; 6 quart, \$7; 8 quart, \$9; 10 quart, \$11; 14 quart, \$14.....	dis 55 5
own Ice Chopper.....	per doz \$7.50, dis 35 5
KNOBS.	
Marriage, (Jap'd 80 c gross).....	dis 60&10 5
5c—Common.....	dis 30&10 5
umacite Door Knobs.....	new list, dis 35&5 5

SASH LOCK.

Clancy's No. 000, per gross..... dis 20%
Nimick & Brittan Mfg. Co..... dis 30%

SASH CORD,

Common do lb, 14c, net
Patent..... do lb, 17c@18c, net
Silver Braided Lake Hemp..... do lb, 50c, dis 10 %
Silver Braid, Lake White Cotton, do lb, 50c, dis 10 %
Silver Braided Lake Drab Cotton, do lb, 55c, dis 10 %
Silver Lake Cable Laid, Bengall Unbleached
Hemp, 17 cts.....dis 10 %
Russian Hemp, 19 cts.....dis 10 %
Italian Hemp, 14 cts.....dis 10 %
Samson Braided, white cotton.....dis 30 %
do drab cotton.....dis 30 %

SASH WEIGHTS.

Solid Eyes, in 500-lb. lots and over, do lb, 1 1/4c, net

SAUSAGE STUFFERS OR FILLEES.

Wiles.....do doz., No. 14, No. 0, \$21.....dis 25 %
Enterprise Mfg. Co.....dis 30 %
Monarch.....dis 40 %

SAWS.

Boynnton's Lightning Cross Cuts, new list.....dis 40 %
Boynnton's Circular and Mill.....dis 40 %
Boynnton's Ice.....dis 25 %
Boynnton's Lightning Hand, Panel and Rip.....dis 25 %
Disston's Circular.....dis 40 %
Disston's Mill.....dis 40 %
Disston's Cross Cut.....dis 40 %
Disston's Hand, Panel, Rip, &c.....dis 20 %
Hubbard, Bakewell & Co. Circular Saws.....dis 40 %
Hubbard, Bakewell & Co. Cross Cut.....do 30c, ft.
Hubbard, Bakewell & Co., One-Man's, X Cut.....dis 40 %
Hubbard, Bakewell & Co., Mill Saws.....dis 40 %
Peace Circular and Mill.....dis 40 %
Peace Hand, Panel and Rip.....dis 25 %
Peace Cross Cuts.....dis 35 %
Peace Band Saws, all widths.....dis 10 %
Webster Cross Cut, with handles.....dis 25 %
Griffin's Hack Saws and Blades.....dis 30 %

SAW FRAMES.

White.....do doz \$1.05, dis 10 %
Saw Rods.....\$10 list, dis 10 %

SAW SETS.

Stillman's Genuine, do doz \$3.50 and \$5.50.....dis 10 %
Stillman's Imitation.....do doz \$3.25, dis 30 %
Common Lever.....do doz \$2.00, dis 30 %
Leach's.....No. 0, \$3.00; No. 1, \$1.50; dis 15 %
Hammer, Hotchkiss.....\$3.50, dis 10 %
Aiken's Genuine.....\$13.00, dis 50 %
Aiken's Imitation.....\$7.00, dis 50 %
Disston's.....dis 20 %
Morrill's.....No. 1, \$15; No. 5, \$52; dis 35 %

SCALES.

Hatch, Counter, No. 171.....do doz \$42, dis 37 1/2 %
Hatch, Tea, No. 161.....do doz \$15.00, dis 37 1/2 %
Union Platform, Keystone.....do, dis 45 %
Chicago Scale Co.....Special
Fairbanks.....dis 20 %
Forsyth Scale Co.....dis 45 %
Howe's.....dis 20 %
Chatillon's Grocers'.....dis 40 %
Chatillon's Eureka.....dis 25 %
Family Universal.....dis 50 %
Family Favorite.....dis 30 %
Family Turnbull's.....dis 30 %
Scale Beams, List of Jan. 12, 1889.....dis 0 %

SCRAPERS.

Adjust. Box Scraper (S. R. & L. Co.) \$6.50, dis 20 %
Box, 1 Handle.....do doz \$4, dis 10 %
Box, 2 Handle.....do doz \$6, dis 10 %
Foot.....dis 45 %
Ship, common.....do doz \$3, net
Wilson Mfg. Co.....dis 10 %

SCREW DRIVERS.

Douglas Mfg. Co.....dis 20 %
Disston's.....dis 40 %
Cowles Mfg. Co.....dis 50 %
Stanley Rule & Level Co.'s Var. Hdl's.....dis 50 %
Stanley Rule & Level Co.'s Black Hdl's.....dis 40 %
Ratchet.....dis 33 1/2 %
Clark's Patent.....dis 25 %
Shepardson.....dis 25 %

SCREWS.

Standard new list, Feb. 15.

Flat Head Bright.....75 @ 10 %
Round Head Blue.....70 @ 10 %
Flat Head Brass.....75 %
Round Head Brass.....70 %
Flat Head Blue (add 2 1/2 % to net).....75 @ 10 %
Brass and Silver Capped.....40 %
Japanned Flat Head.....70 @ 10 %
Coach, Patent Gimlet Point.....dis 75 %
Coach, Common or Lag.....dis 60 @ 10 %
Bed.....dis 10 %
Machine, Flat Head, Iron.....dis 55 %
Machine, Round Head, Iron.....dis 50 %
Bench, Iron.....dis 50 @ 10 %
Bench, Wood, Beach.....do doz \$3.00, dis 10 %
Bench, Wood, Hickory.....dis 20 @ 10 %
Hand, Wood.....dis 20 @ 10 %
Hand Rail, Sargent's.....dis 60 @ 10 %
Hand Rail, Humason, Beckley & Co.'s.....dis 40 @ 10 %
Hand Rail, Am. Screw Co., list Jan. 1, '81.....dis 70 %
Jack (Wilson's).....dis 25 %

SCREEN FRAMES AND MIXTURES.

Standard Window Screens No. 1, do doz \$4, 2 1/2
Door " No. 5, \$15; dis 50 @ 10 %
" Window Corner Irons, No. 3, doz, st., \$3
" Door " No. 6, do, do, \$3
" Door Latches, do dozen, \$3.60.....dis 50 %
Porter's Patent Window and Door Screen Frames:

PER DOZ. SETS.

	In White.	Im. Walnut.
No. 20.....	\$2.75	\$3.25
No. 21.....	2.25	4.00
No. 22.....	5.50	6.75
No. 23.....	6.00	7.50
No. 30.....	9.00	11.00

Porter's Corners—

No. o. Corners and Sticks complete for a three-foot window, do doz sets.....\$4
No. 1. Set for window, do doz sets Bronzed,
do 40 Nickel, \$6.62
No. 1 1/2. " " do doz sets, Bronzed,
do 45 Nickel, \$7.50
No. 4. " " do doz sets, Bronze,
do 40 Nickel, \$8.00
No. 3 1/2. " " do door, do doz sets,
Bronzed, \$1.20; Nickel, \$3.00
No. 4 1/2. " " do door, do doz sets,
Bronzed, \$2.00; Nickel, \$4.00
No. 2 1/2. " " do door, do doz sets, Bronzed,
do 67 1/2 Nickel, \$15.00
No. 3. " " do doz sets, Bronzed,
do 120 Nickel, \$24.00
Window screen frames (Stuart's).....dis 25 %

SHEARS AND SCISSORS.

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Pruning.....see Pruning Hooks and Shears
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Sliding Door, Russell's Anti-Friction.....dis 60¢ &
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Wallace's Steel Silver Plated.....dis 35¢ &
Rogers Bros 1847.....dis 50¢
C. Rogers & Bro.....dis 40¢ &

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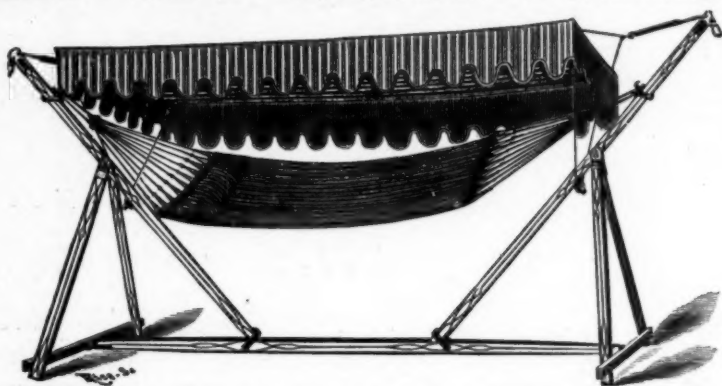
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Improved Steam Jacket Kettle
PLAIN OR ENAMELED.

SIZES.
20 Gallons.
35 "
70 "
100 "



Fig. 134.
Double Jacket Steam Kettle.

SIZES.
1 Gallons.
6 "
10 "
15 "
25 "
30 "
50 "
60 "
80 "
125 "



Fig. 136.
Iron Double-bottom Steam Kettle.

WITHOUT JOINTS.

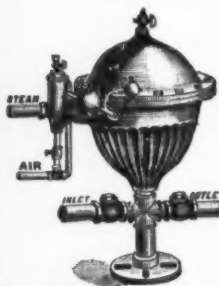
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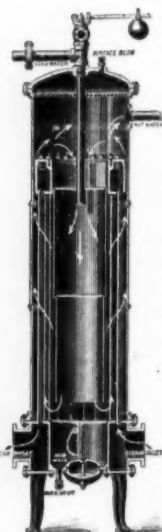
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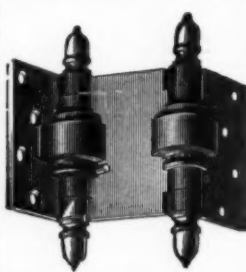
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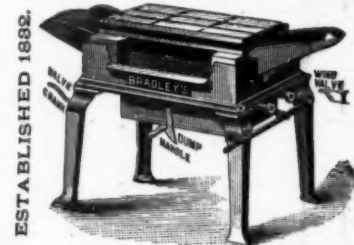
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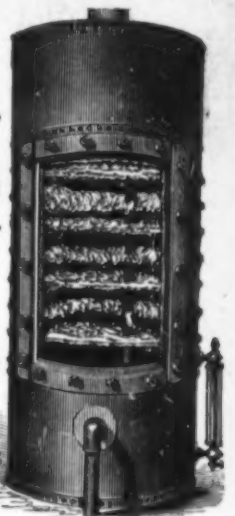
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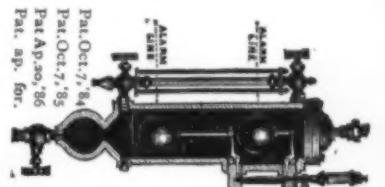
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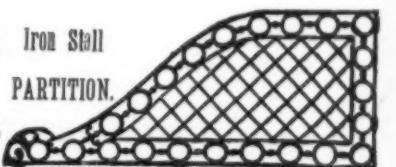


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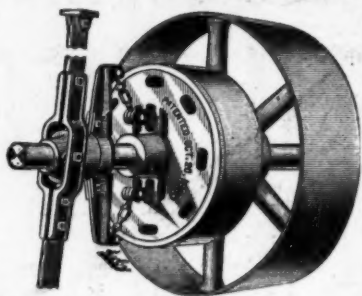
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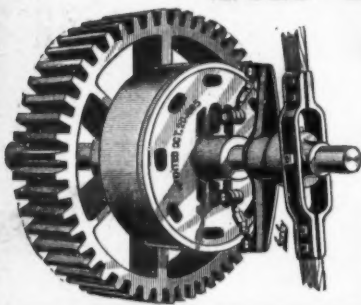
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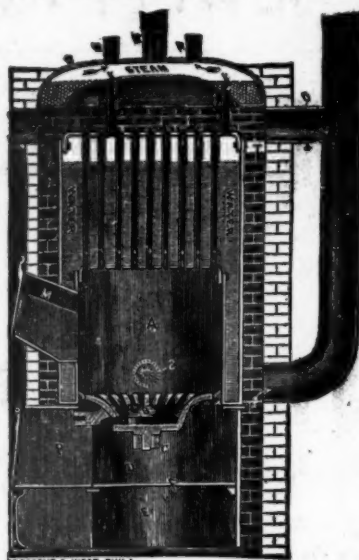
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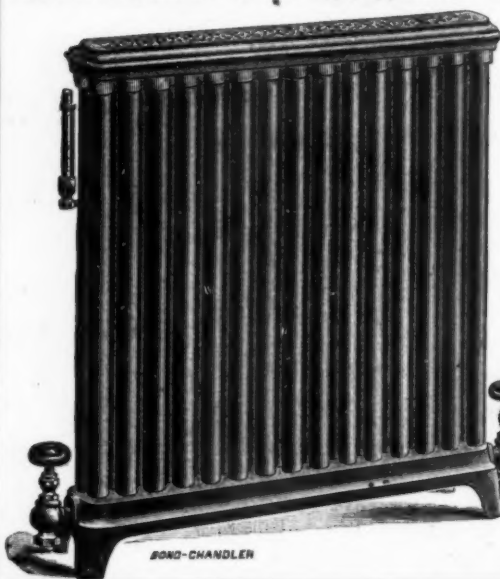
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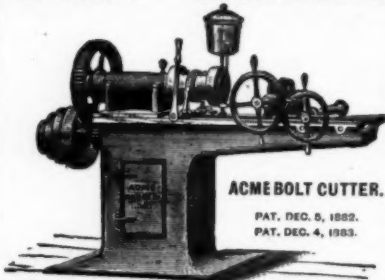
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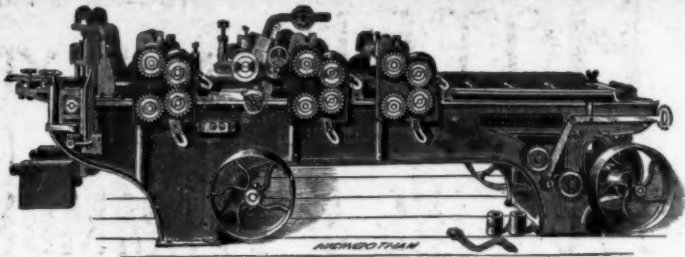
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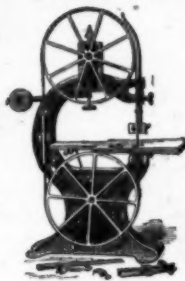
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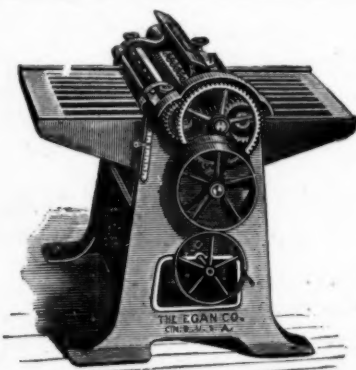
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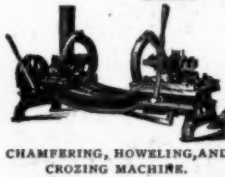
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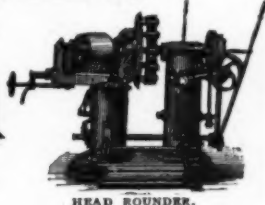
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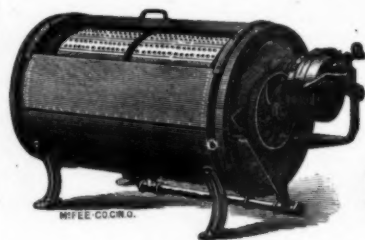
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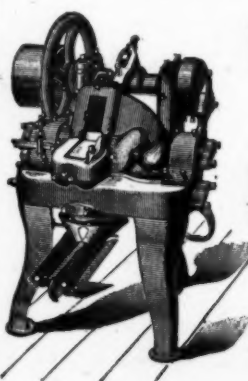
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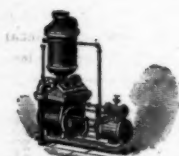
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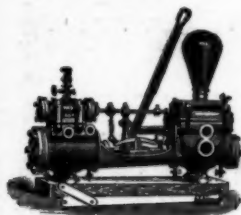
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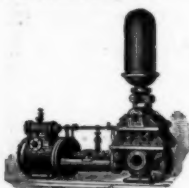
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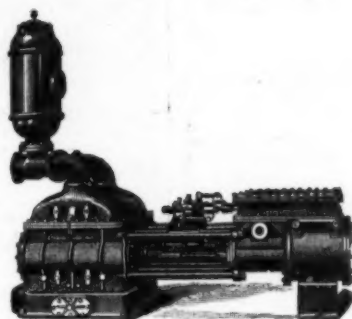


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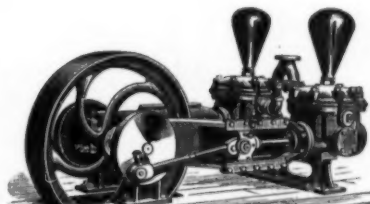


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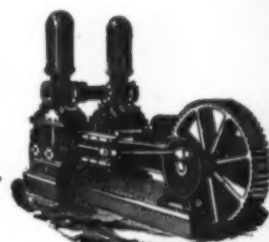
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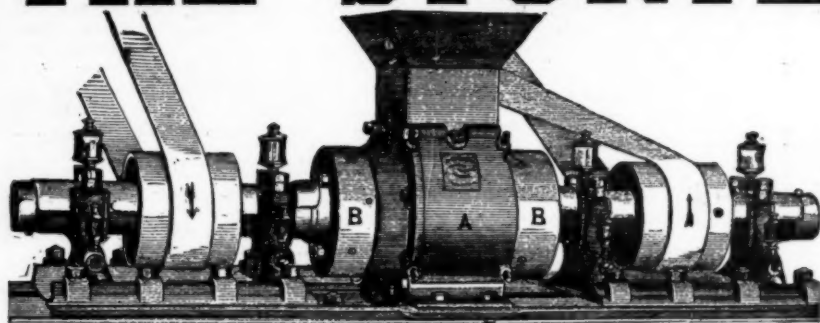
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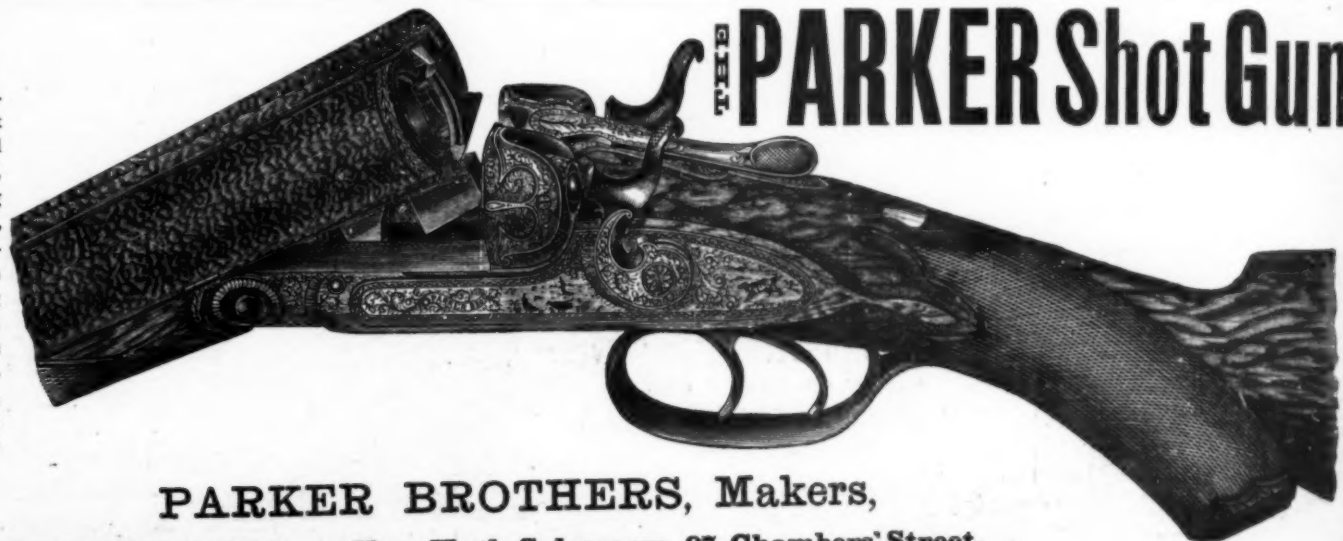
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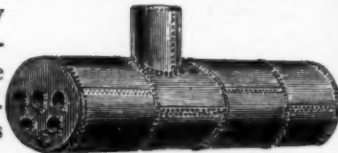
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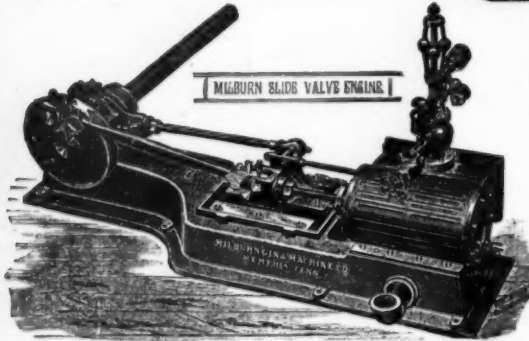
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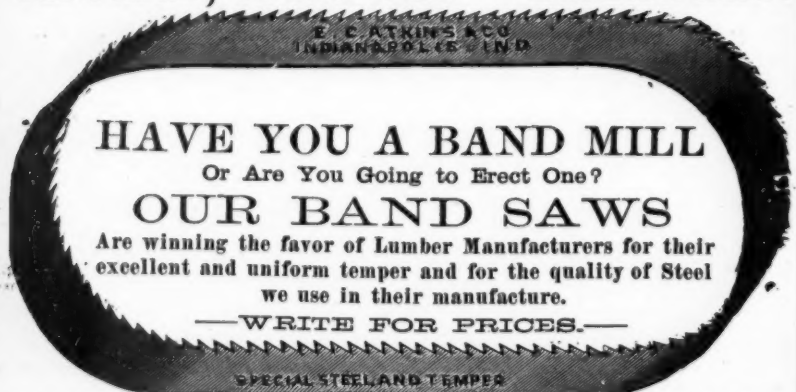
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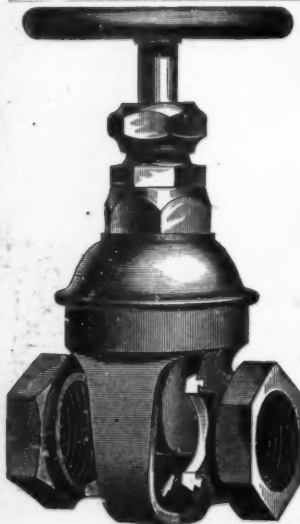
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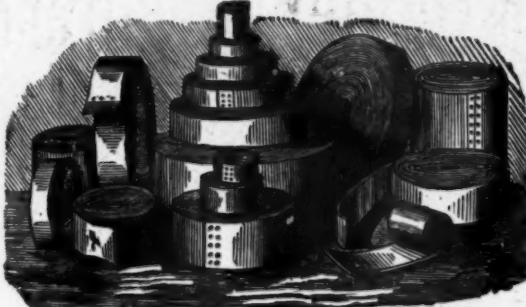
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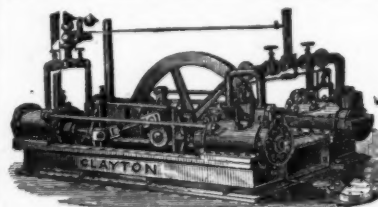
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